TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

A Penton Publication

June, 1950

Volume 15—Number 6

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CHECK AND PASS ALONG

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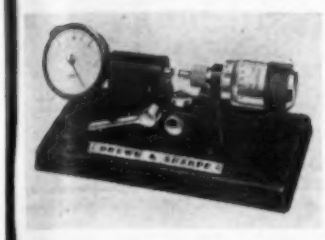
Use Inquiry Slips — Pages 4 and 68

EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

BENCH MICROMETER
measures small parts accurately

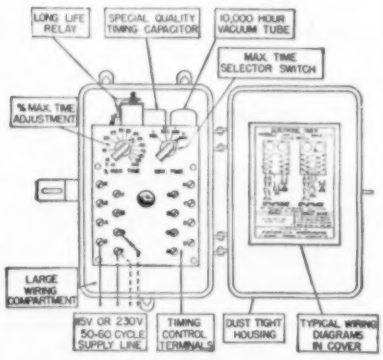


Usable in three different ways, No. 245 indicating bench micrometer measures from 0 to ½-in. by 0.0001-in. directly from micrometer thimble; can be used as comparator and set without additional standards with readings to 0.0001-in. taken from dial gage; and measures by 0.0001-in. directly from dial gage with micrometer set at nearest 0.001-in. of measurement. It has adjustable measuring pressure from 8 oz to 2 lb that remains constant when set and is useful for measuring such resilient materials as rubber, fabric and plastics. Adjustable work support permits small and large diameter pieces to be centered on measuring surfaces, and retractor lever withdraws anvil instantly for rapid repeat measurements. Zero adjustment is made by rotation of dial bezel. Made by **Brown & Sharpe Mfg. Co.,** Dept. 43, Providence 1, R. I.

▲ For more details circle **NED-3900** on enclosed inquiry slip ▲

ELECTRONIC TIMER
for process and machine control

Interval, delayed action, automatic repeat and programming types of timing as well as variations of these are afforded by series 30 electronic timer. Flexibility is accomplished by bringing out many points of circuit through terminals on front panel. Circuit is self-compensating for changes in line voltages, and replacement of vacuum tube will not alter original 2 per cent limit of accuracy variation. Employing only one tube and one relay, unit operates on 115 or 230 v 50/60 cycles and consumes 25 w. Output is two single-pole double-throw switches, and relay contact rating is 10 amp 115 v ac noninductive. Made by **Photoswitch Inc.,** 77-89 Broadway, Cambridge 42, Mass.



30HLJ ELECTRONIC TIMER

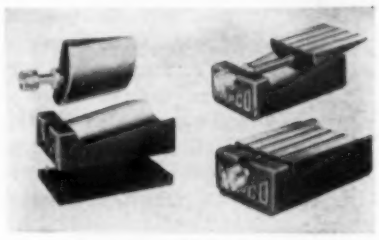
▲ For more details circle **NED-3901** on enclosed inquiry slip ▲

INDUSTRIAL SWEEPER
cleans 42-in. swath at 6 mph

Powered by 7½-hp air cooled engine equipped with self-starter, this tri-wheel industrial sweeper is capable of cleaning 100,000 sq ft of open area per hour. It is all-enclosed flush-bodied type that steers in same manner as automobile and is equipped with vacuum dust control system that provides dustless operation under extreme conditions. Adaptable to both indoor and outdoor use, machine draws dust into easily emptied metal box; makes 90-degree turns; and has six-ply punctureproof tires and automotive type electrical system that includes battery, starter, generator and lights. Made by **Wayne Mfg. Co.,** 1203 E. Lexington Ave., Pomona, Calif.

▲ For more details circle **NED-3902** on enclosed inquiry slip ▲

MACHINE LEVELING JACK
mounting pads absorb vibration



Equipped with Vi-Sorb mounting pads, Empco machine leveling jacks eliminate creepage and reduce machine vibration. Self-aligning feature has been improved by provision to compensate for uneven floors while retaining full bearing of lifting surfaces up to maximum height of adjustment. Turn-O-Screw leveling feature facilitates installation and periodic adjustments. Made by **Enterprise Machine Parts Corp.,** 2727 Jerome Ave., Detroit 12, Mich.

▲ For more details circle **NED-3903** on enclosed inquiry slip ▲

VARIABLE-PITCH PULLEYS
sizes in 2 and 3-hp range available

Infinitely variable speed changes in 4 to 1 speed ratio are afforded by Models 1050-20 and 1050-30 Roto-Cone variable-pitch pulleys which cover 2 and 3-hp range, respectively. Utilizing V-to-V-belt drive, all units are dynamically and statically balanced. Rack-and-gear arrangement controls sheave movement and assures belt alignment throughout entire speed range. Pulleys are installed easily in either horizontal or vertical position without special mounting. Made by **Gerbing Mfg. Corp.,** 650E W. Washington Blvd., Chicago 6, Ill.

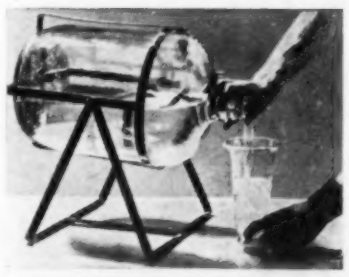
▲ For more details circle **NED-3904** on enclosed inquiry slip ▲

INTERCHANGEABLE PUNCHES
round and special shapes are available

Incorporating R-B interchangeable feature in which ball-bearing lock in retainer engages in ball seat on punch shank, these high speed steel round punches provide secure positioning both radially and vertically. This design permits instant insertion or removal of either punches or dies. These high speed steel punches supplement established line of round tool steel punches and are carried in stock in same size ranges. Made by **Allied Products Corp.,** Richard Brothers Div., 1560 E. Milwaukee Ave., Detroit 11, Mich.

▲ For more details circle **NED-3905** on enclosed inquiry slip ▲

BOTTLE TILTER
facilitates pouring of liquids



Safe and easy means of pouring liquids into smaller containers is provided by GS tilter for 5-gal bottles. It is intended to prevent accidents caused by spilling, splashing and carelessness in handling liquids. Cradle is made of steel, and chain is furnished to hold bottle in position when tilted. Price is $6.25. Made by **General Scientific Equipment Co.,** 2701 W. Huntingdon St., Philadelphia 32, Pa.

▲ For more details circle **NED-3906** on enclosed inquiry slip ▲

ABRASION TESTING MACHINE
tests solid and coated materials

This Abraser abrasion wear testing machine incorporates rotary rub-wear action of dual abrading wheels crisscrossing their abrasion path. Right wheel rubs specimen from center outward, and left wheel rubs specimen from outside in toward center so that abrasion lines cross each other. Action is continuous throughout 360-degree rotation of specimen and closely parallels abrasive wear encountered in actual use. Machine employs 115-v 60-cycle capacitor motor with heavy-duty worm gear drive, powerful vacuum pickup unit with dual suction nozzle and electric counter for registering wear cycles. Two sets of stainless steel weights in addition to weight of arm provide 250, 500 and 1000-gram wheel pressures against specimen. Made by **Taber Instrument Co.,** 110 Goundry St., North Tonawanda, N. Y.

▲ For more details circle **NED-3907** on enclosed inquiry slip ▲

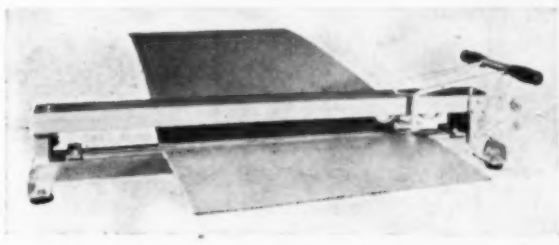
OIL DISPENSING UNIT
holds standard 55-gal oil drum

Such operations as servicing hydraulic machines with new oil, removing dirty oil from hydraulic supply tanks, servicing machine tools with clean coolant, servicing quench oil to heat treating machines, and transferring lubrication oil from drums to engine crankcases or gear boxes are facilitated by Houdaille mobile dispensing unit. Fully enclosed vacuum pump and 1/3-hp motor are operated by single manual switch, and three-way valve permits quick changeover from vacuum to pressure side of pump as needed. Airtight lid for open top drums is equipped with Mercoid liquid level control to prevent overflow and spillage. Made by **Honan-Crane Corp.,** 668 Wabash Ave., Lebanon, Ind.

▲ For more details circle **NED-3908** on enclosed inquiry slip ▲

SHEET MATERIAL CUTTER
for corrugated paper and packing

Recommended for use in shipping rooms, sample departments or on package engineering setups, Chippacutter sheet material cutter can be hand, foot or motor powered.



It is designed for cutting single or double-face corrugated paper, Chippatubes, Chippatube rolls, Kimpack and other types of cellulose wadding material. It will also cut kraft paper, aluminum foil, waterproof papers, reinforced cross cord paper and many other such materials. Cutter uses straight or serrated knives and can be mounted on table or wall. Made by **Chippewa Paper Products Co.,** Dept. D, 3315 W. 48th Place, Chicago 32, Ill.

▲ For more details circle **NED-3909** on enclosed inquiry slip ▲

VALVAIR GIVES YOU . . . *Any* CONTROL ASSEMBLY ON A STANDARD VALVE BODY

. . . because parts are *Interchangeable*

Cylindrical ends on all valve bodies (in respective sizes) are identical, making possible *any control assembly.* Internally, stem, spacer, packer spreader, flange end bearings, and spring are interchangeable. Save on maintenance and stock; save by paying less for valves which embody standardized parts.

★ ★ ★

Sizes: 1/4", 3/8", 1/2", 3/4", 1".

★ ★ ★

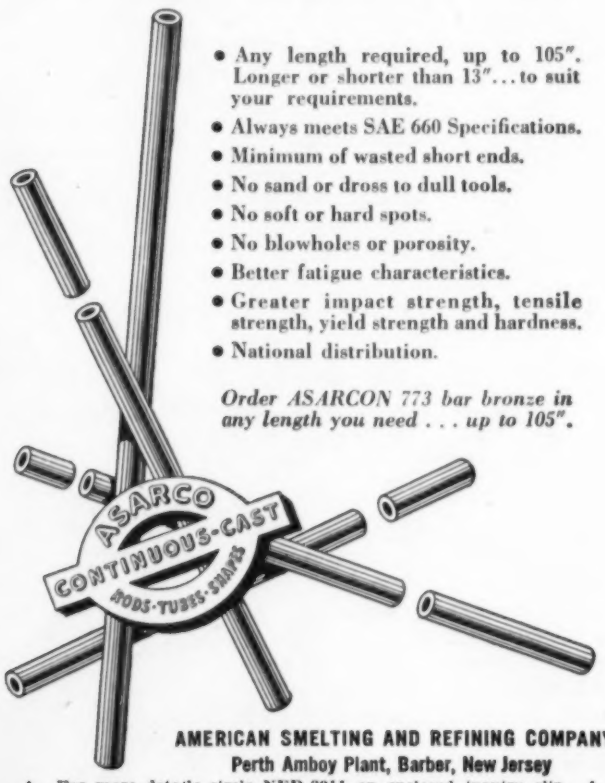
Ask for Bulletin "A-N"

VALVAIR CORPORATION • 454 Morgan Avenue, Akron 11, Ohio
AFFILIATE: SINCLAIR-COLLINS VALVE CO.

Rely Upon Valvair — 2-WAY — 3-WAY — 4-WAY

▲ For more details circle NED-3910 on enclosed inquiry slip ▲

Asarcon 773 BEARING BRONZE ...IN ANY LENGTH YOU NEED



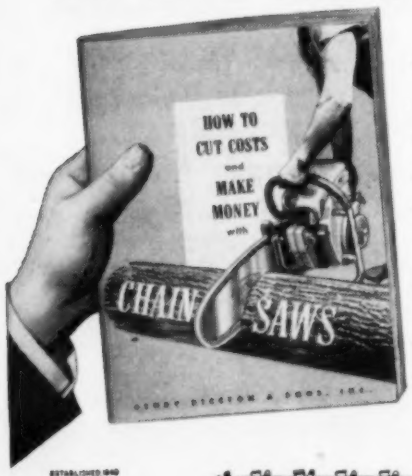
- Any length required, up to 105". Longer or shorter than 13"... to suit your requirements.
- Always meets SAE 660 Specifications.
- Minimum of wasted short ends.
- No sand or dross to dull tools.
- No soft or hard spots.
- No blowholes or porosity.
- Better fatigue characteristics.
- Greater impact strength, tensile strength, yield strength and hardness.
- National distribution.

Order ASARCON 773 bar bronze in any length you need . . . up to 105".

AMERICAN SMELTING AND REFINING COMPANY
Perth Amboy Plant, Barber, New Jersey

▲ For more details circle NED-3911 on enclosed inquiry slip ▲

This BIG 36-PAGE BOOK can save YOU money!



Tells you how
...to buy
...to use
...to profit
from chain saws

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Send for your copy now. Simply fill in coupon and mail it today.

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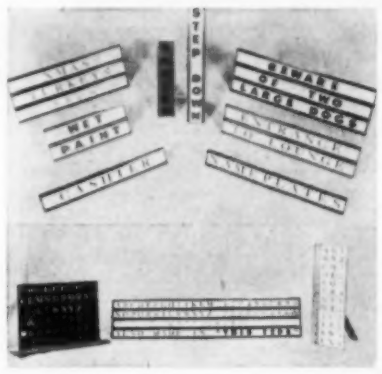
Henry Disston & Sons, Inc. (Adv. Dept.)
629 Tacony, Philadelphia 35, Pa., U.S.A.
Gentlemen:
Please send me my FREE copy of "How To Cut Costs and Make Money with Chain Saws."
Name _____
Street _____
City _____ State _____

▲ For more details circle NED-3912 on enclosed inquiry slip ▲

Each month, over 65,000 copies of NEW EQUIPMENT DIGEST are mailed to key engineering, production, operation and maintenance, and purchasing executives in 42,425 of the leading industrial plants in this country. If you serve in one of the above functions in an established company and do not receive our publication regularly, we suggest that you fill in completely the coupon in the self-mailing slip facing page 4 or 68.

A. N. Gregg
EDITOR

MESSAGE DISPLAY BOARD employs interchangeable characters



Any desired message can be produced easily on Dojama washable and weather-proof composition board molded from Styron plastic. Supplied with changeable letters, it is assembled from one or more tongue - and - groove channels. Each channel holds one line of character plates approximately 1-in. square, on which are silk-screened various characters, numerals and symbols used in forming messages. Blank plates can be interspersed to produce decorative effects.

Boards are made in any size from 2 to 48 in. long and in red, black or white. Characters are available in fine or bold type style in more than 30 color combinations. Boards can be displayed standing on flat surface, supported by stainless steel easels. Metal hangers and special permanent or portable adhesive hangers can be supplied. Made by **Dojama Eastern Corp.,** 5493 Gordonsville Blvd., Gordonsville, Va.

▲ For more details circle NED-3913 on enclosed inquiry slip ▲

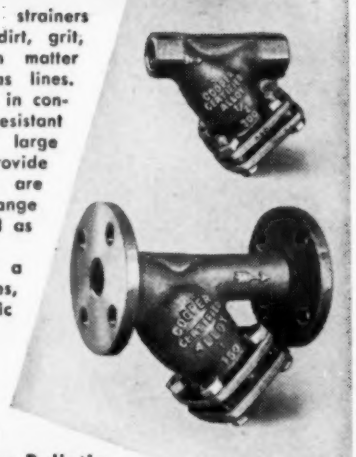
PORTABLE STEEL LADDER will extend from 4 to 24 ft

Easily knocked down for storing or carrying, this portable ladder is of sturdy steel construction and lighter than similar capacity aluminum ladders. It is equipped with safe working platform and has extra bearing plates and leveling screws for use in soft and uneven earth. Ladders can be assembled by one man in less than 7 minutes and is easily carried in passenger car. Made by **Atlas Industrial Corp.,** 845-ND 39th St., Brooklyn 32, N. Y.

▲ For more details circle NED-3914 on enclosed inquiry slip ▲

COOPER ALLOY STAINLESS STEEL Y-PATTERN STRAINERS

Cooper Alloy Y-pattern strainers protect equipment from dirt, grit, scale and other foreign matter present in liquid or gas lines. Simple in design, rugged in construction, these corrosion-resistant strainers have unusually large screening areas to provide maximum efficiency and are available in the complete range of stainless alloys as well as in nickel or monel.
Screens are available in a wide variety of mesh sizes, designed to suit the specific straining problem.



Write for Descriptive Bulletin

THE COOPER ALLOY FOUNDRY CO.
HILLSIDE, NEW JERSEY
THE WORLD'S LARGEST FOUNDRY DEVOTED EXCLUSIVELY TO THE CASTING OF STAINLESS STEEL

▲ For more details circle NED-3915 on enclosed inquiry slip ▲

employee heating comfort is measured "by the FOOT."

For comfort, one Btu below the knees is worth 100 above the head. That's why it's wise to insist on

DRAVO *Counterflo* HEATERS

Floor chills banished—each unit blankets from 4,000 to 20,000 square feet with warm air at the working level, reducing roof heat loss, saving fuel dollars. Air throw 100-150 feet; no ducts needed for open areas. Users report first cost 50 to 66% less than wet-type systems. Oil or gas-fired, readily converted. 80-85% efficiency. Units furnish ventilating air in summer. Immediate deliveries, easy installation. Ask for Bulletin EK-523-576.

DRAVO CORPORATION
DRAVO BUILDING, PITTSBURGH 22, PA.
Sales Representatives in Principal Cities
Mfd. and Sold in Canada by Marine Industries, Ltd., Sorel, Quebec

▲ For more details circle NED-3916 on enclosed inquiry slip ▲

BROWNING Gripbelts

MATCHED AND SEALED FOR YOUR PROTECTION

Accurately matched to assure uniform performance and long life. Securely sealed with wire and lead slug to keep the set together until installed on the machine.

Nationwide Service—Write for the name of the BROWNING Gripbelt Distributor near you

BROWNING MANUFACTURING COMPANY
INCORPORATED
MAYSVILLE, KENTUCKY, U. S. A.

▲ For more details circle NED-3917 on enclosed inquiry slip ▲

Cut Mowing Costs WITH ROSEMAN GANG MOWERS

EFFICIENT FLEXIBLE LABOR SAVING LOW-COST

ROSEMAN Roller Mowers are the answer to reduced maintenance budgets and increasing labor costs. The ability to mow grass at all locations, more quickly and economically, and at the same time develop a smoother and better turf, are ROSEMAN Mower features. Will give maximum operating efficiency under the toughest conditions. Quality constructed of finer materials assures years of trouble-free service.

Wire, Write or Phone for Literature and Prices. TIMKEN BEARING EQUIPPED

ROSEMAN MOWER CORP. : Phone UNiversity 4-1842 Evanston, Illinois

ROSEMAN HOLLOW ROLLER MOWERS

▲ For more details circle NED-3918 on enclosed inquiry slip ▲

Protect
HYDRAULIC EQUIPMENT
WITH HIGH PRESSURE
MICRONIC FILTERS

• 3000 p.s.i. Operating Pressure, Micronic Filtration, Low Pressure differential, Compact in Line Type

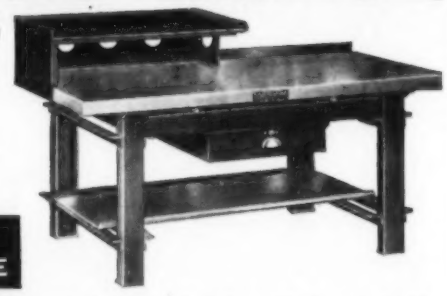
• Maximum Protection at minimum cost. Replaceable element.

West Coast: H. E. Webb
918 N. Kenilworth Ave., Glendale, Calif.

WATERMAN ENGINEERING Company
721 CUSTER AVENUE • EVANSTON, ILLINOIS

▲ For more details circle NED-3919 on enclosed inquiry slip ▲

The Experts Choose
CHALLENGE
WORK BENCHES



Four Sizes
28 Inches Wide by 4, 5, 6 or 7 feet long. Top 2 Inches Thick.

BECAUSE THEY HAVE

1. Heavily ribbed, smoothly machined unyielding cast iron top.
2. Table equipped with lock-leveling screws.
3. Sturdy, steel welded base with large steel shelf.
4. Steel tool box shelf supported clear of bench top.
5. Steel guard rail at back.
6. Steel drawer with lock.
7. Portability.

Challenge
THE CHALLENGE MACHINERY CO.
GRAND HAVEN, MICHIGAN

▲ For more details circle NED-3920 on enclosed inquiry slip ▲

FRACTIONAL... HORSE POWER GEARS

PRECISION WITH PRODUCTION VOLUME

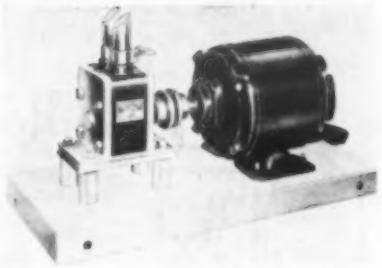
Internal
Helical
Spur
Elliptical
Worm Gear
Worms
Ratchets
Sprockets

Send for our new bulletin.

Rynel Corporation
STERLING, ILLINOIS

▲ For more details circle NED-3921 on enclosed inquiry slip ▲

CORROSIONPROOF PUMP
fluid never touches metal parts



Constructed so that fluid flows on outside of Flex-i-liner and on inside of body block, this pump is particularly suitable for handling acids, alkalies, industrial alcohols and other corrosive liquids as well as many corrosive gases. Lining material can be pure gum or synthetic rubber depending upon particular application, while body block is corrosion and abrasion resistant Bakelite. Eccentric rotor mounted on ball bearing rides inside and activates liner to produce 'squeegee' action which is basis of pump operation.

Pump is positive displacement type and self-priming, with no possibility of leakage or contamination. It is available in five models ranging from 20 to 300 gph in capacity and can be obtained dismounted or mounted and direct-connected to ¼-hp ac motor operating at 1750 rpm. Made by **Vanton Pump Corp.**, Dept. NED, Empire State Bldg., New York 1, N. Y.

▲ For more details circle NED-3922 on enclosed inquiry slip ▲

PHOTOELECTRIC ACCESSORIES
light sources and phototube holders

Applicable with photoelectric relays for counting, signaling, limiting, controlling or protecting, standard accessories consists of complete range of improved light sources and phototube holders. General-purpose light sources have snap-on covers to facilitate replacement of prefocused lamps. Phototube holder is furnished complete with phototube, lens, masks and 9-ft connecting cable. Mounting clamp and standard pipe thread for ½-in. conduit are provided for mounting convenience. Phototube holders and 3-in. lens light source are weather-resistant and dustproof. Made by **General Electric Co.**, Schenectady 5, N. Y.

▲ For more details circle NED-3923 on enclosed inquiry slip ▲

DO YOU KNOW? Information on more than a thousand kinds of atoms is given on 26 x 50-in. wall chart. Arranged in checkerboard fashion, squares indicate all known chemical elements and their isotopes. Shading shows whether atom is stable form that occurs in nature, radioactive form that occurs naturally or one artificially made radioactive in atom-smashing experiments. Other data such as composition, speed of decay and radiations emitted are given in this "Chart of the Nuclides". Issued free by General Electric Co., Schenectady 5, N. Y.

▲ For more details circle NED-3924 on enclosed inquiry slip ▲

RAYTHEON
fractional hp
MOTORS
CONCENTRATED POWER

"Count on Raytheon to run it." That's what design engineers are saying. They're the men who appreciate the Creative Craftsmanship that goes into Raytheon fractional hp motors. When you want to run things, FANS, BLOWERS, HEATING EQUIPMENT, appliances or what have you—count on Raytheon motors to do the job.

Type 230 Shaded 2-Pole Motor. For continuous duty without fan cooling. 1/200 to 1/50 hp at 3200 rpm Flat Speed Torque Curve and High Starting and Pull Up Torque are characteristic of all type 230 Raytheon motors. Write for Data Bulletin 1000.

RUSSELL ELECTRIC COMPANY
MOTOR DIVISION OF **RAYTHEON** MFG. CO.
4501 S. Western Blvd. • Dept. F-25 • Chicago 9, Ill.

▲ For more details circle NED-3925 on enclosed inquiry slip ▲

IDEAL "Hand-Type" CLEANER
SUPER POWER • VALUE PERFORMANCE

1-1/3 HP motor—Weighs only 14½ lbs. Also 1/2 and 2/3 HP models.

BLOWS
concentrated blast of dry air at 300 *miles* per hour. Blows grit, dust and lint from hard-to-get-at places. Evaporates moisture.

VACUUMS
dirt, metal, lint and wood particles, bench litter, etc.

SPRAYS
paint, varnish, lacquer, insecticides and deodorants.

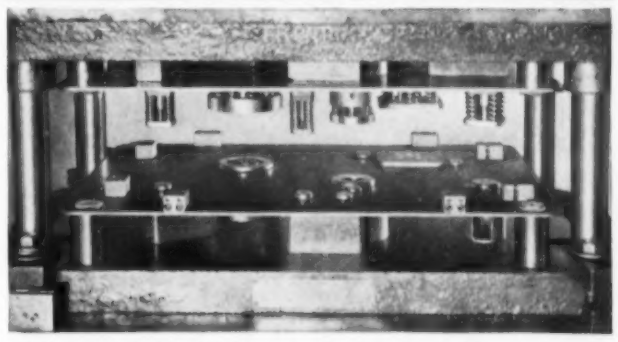
Does a Better Job—on Any Job!

TRY IT Free!

SOLD THROUGH AMERICA'S LEADING DISTRIBUTORS

IDEAL INDUSTRIES, Inc.
1032 Park Avenue, Sycamore, Illinois
Give us FREE DEMONSTRATION of the IDEAL "Hand-Type" Cleaner in our plant.
Name_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-3926 on enclosed inquiry slip ▲



● Magnetic Perforating Die set-up in small inclinable punch press.

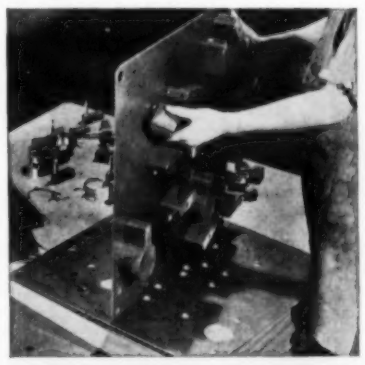
Magnetic
PERFORATING DIES
NEW and FAST
Method for perforating Sheet Metal

SAVE PRESS DOWN TIME. Approximately 15 minutes required to change from punching one subject of say 20 holes to a different 20 hole arrangement. Whistler Magnetic Perforating Dies *increase* press production.

HOLD CLOSE TOLERANCES. Hole centers may be held to .0005" accuracy or as close as can be jig bored.

GREATER PUNCH AND DIE LIFE. Concentricity of punch and die assured thus giving uniform clearance around punch, increasing punch and die life.

SAVE FLOOR SPACE. Die storage cut to a minimum because only the 2 locating templets are stored...all that is required to duplicate the set-up.



● Die retainers complete with bushings being inserted in die templet.

REDUCE DIE COSTS. Whistler Magnetic Perforating Punch and Die units are used repeatedly for different hole arrangements. When completing one job, remove all units from templet and put them into service on the next different set-up. Combine any number of hole sizes and shapes. Punch and die costs are amortized over continued re-use in many jobs.

Write for Catalog... Whistler Magnetic Perforating Punches and Dies have proven their cost-cutting advantages in many prominent plants. The catalog shows how. Send for it today.

S. B. WHISTLER & SONS, Inc.
750 MILITARY ROAD, BUFFALO 17, N. Y.

Also manufacturers of a complete line of drawing, forming, blanking and progressive dies to special requirements.

First public showing of Whistler Magnetic Dies at work—Booth 832—ASTE Convention—April 10 to 14—Philadelphia.

▲ For more details circle NED-3927 on enclosed inquiry slip ▲

In the face of rising costs, more users are turning to CHROMALOX Electric Heat for efficiently and economically doing their heating jobs. Easy to install CHROMALOX Units increase production capacity and decrease rejects in countless applications. Low initial costs, exact temperature control, dependable service, are a few of the other advantages gained by using CHROMALOX Electric Heaters in your plant.

WANT MORE KNOW HOW?

Write today for your copy of Chromalox Catalog 50 and the booklet "100 Ways to Apply Electric Heat".

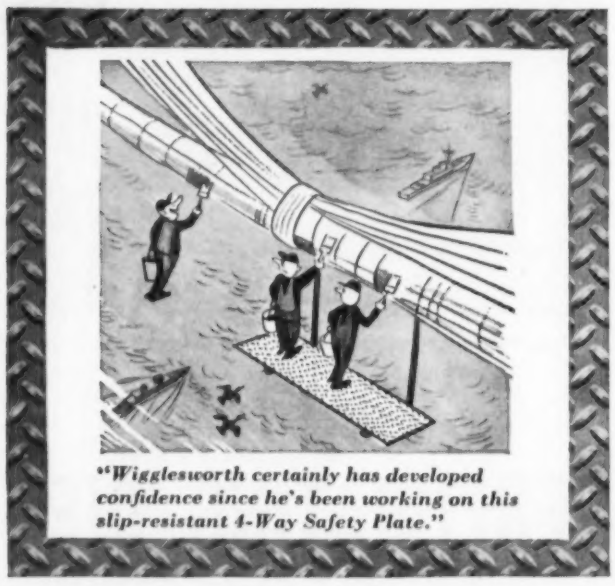
EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other advertisement on page 49.

CHROMALOX IB-1

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-3928 on enclosed inquiry slip



"Wigglesworth certainly has developed confidence since he's been working on this slip-resistant 4-Way Safety Plate."

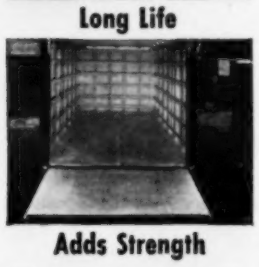
For greater safety under foot, in your plant and on your products

Inland 4-Way® Safety Plate

Firesafe

Long Life

Quick Starts—Stops



Adds Strength

STOCKED BY LEADING STEEL WAREHOUSES

INLAND

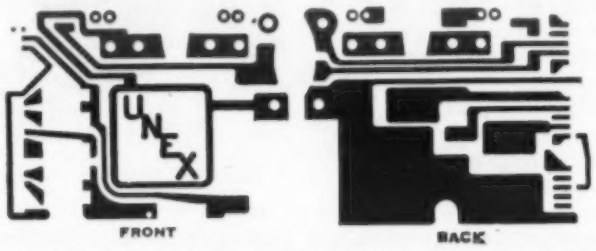
INLAND STEEL COMPANY, Dept. NED60
38 So. Dearborn St., Chicago 3, Ill.
Sales Offices: Chicago, Davenport, Detroit, Indianapolis, Kansas City, Milwaukee, New York, St. Louis and St. Paul.

New Bulletin with New Ideas—Just Out! Bulletin F1. Complete engineering and application data. Send for it!

For more details circle NED-3929 on enclosed inquiry slip

TWO-SIDED PRINTED CIRCUITS
use copper deposit on plastic sheet

Made up of thin deposit of copper on each side of Bakelite, Vinylite or polystyrene sheet, this two-sided printed circuit has copper deposits so accurately lined up that



hole drilled in predetermined location will make contact with circuit on each side. Copper can be in thickness of 0.0015 or 0.003-in. and can be on surface of plastic sheet or imbedded flush with surface. Copper surfaces can be dull or given high burnished finish. Made by **Emeloid Co., 1247 Central Ave., Hillside 5, N. J.**

For more details circle NED-3930 on enclosed inquiry slip

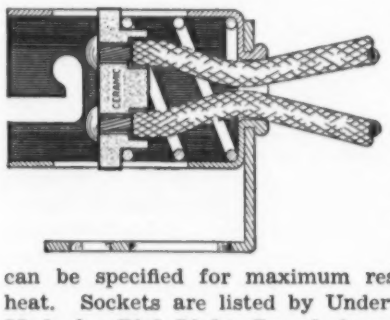
CASE REJECTOR MECHANISM
detects underweight cartons

When installed in production or packing conveyor line, this case rejector mechanism detects and diverts cartons that are underweight. Cartons proceeding across device are stopped, checked by weight and allowed to proceed if acceptable. If underweight carton is detected by dial scale, this carton is automatically diverted into reject line. Made by **Alvey Conveyor Mfg. Co.,** 3200 S. Broadway, St. Louis 18, Mo.

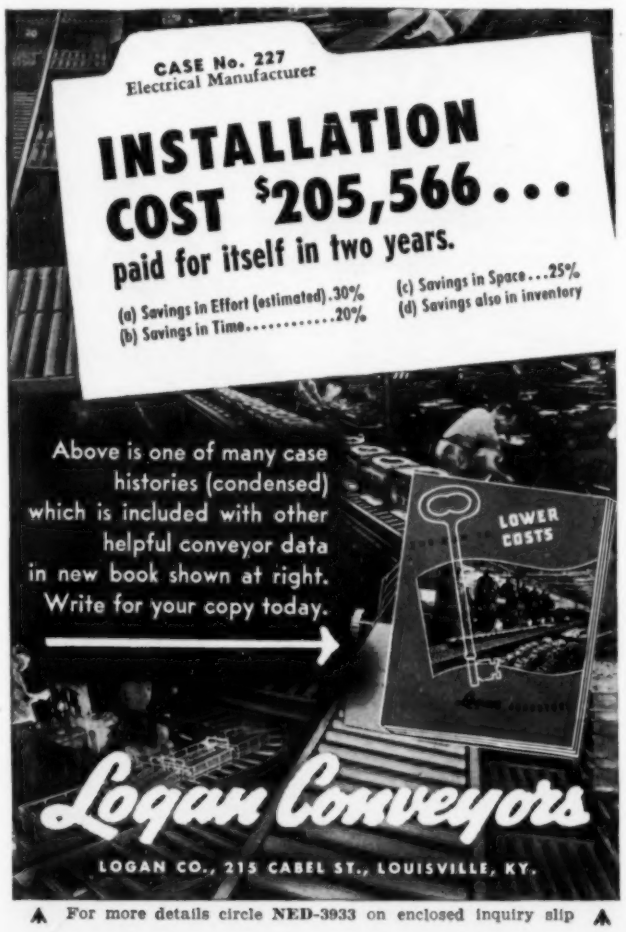
For more details circle NED-3931 on enclosed inquiry slip

PILOT LAMP SOCKETS
ceramic disk provides insulation

Intended for mounting lamps with double contact bayonet bases, NE 12 series sockets have flexible wire leads for circuit connections. These terminate inside socket shell in contacts mounted in heavy ceramic disk having recesses which permit wire covering to enter so that no bare metal is exposed. When high ambient temperatures are anticipated, asbestos covered wire leads can be specified for maximum resistance to effects of heat. Sockets are listed by Underwriters' Laboratories. Made by **Dial Light Co. of America,** Dept. NED, 900 Broadway, New York 3, N. Y.



For more details circle NED-3932 on enclosed inquiry slip



For more details circle NED-3933 on enclosed inquiry slip

The Counter That Gives You a PRINTED RECORD Every Time!

"PVR" PRODUCTIMETER

Visual Count and Printed Record of Your Plant Production

- provides certified record of pieces produced.
- eliminates illegible handwriting and error.
- decreases timekeeping and accounting time.
- prints multiple copies or single cards.

Durant Sales Engineers will be glad to demonstrate.

Send for Bulletin PVR

DURANT MANUFACTURING COMPANY
1922 N. Buffum Street, Milwaukee 1, Wisconsin
122 Orange Street, Providence 3, R. I.
Representatives in Principal Cities

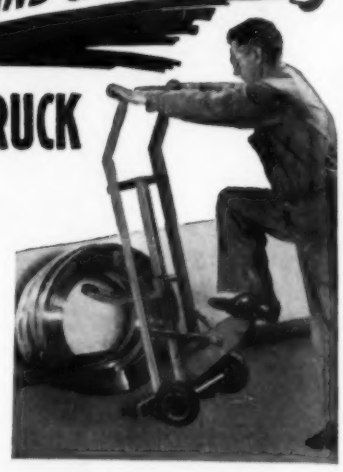
PRODUCTIMETERS
SINCE 1879 Speedometers OF INDUSTRY

For more details circle NED-3934 on enclosed inquiry slip

HANDLE Strip and Wire Coils

THE EASIEST AND CHEAPEST WAY

SABIN COIL TRUCK



Built especially for handling coils, tires, wheels or anything with a hole through it.

As truck is moved up to coils or other articles, the arm passes through hole, then an easy pull back on handle picks up load.

Follower wheel minimizes trucking effort.

Write For Bulletin

THE SABIN MACHINE CO.
6536 Carnegie Ave.
Cleveland 3, Ohio

THE SABIN LINE OF ONE-MAN TRUCKS *includes:*

KEG TRUCKS, PACKAGE TRUCKS, BOX TRUCKS, BARREL TRUCKS, DRUM TRUCKS, SHOP TRUCKS, TOTE PAN TRUCKS, SPECIAL TRUCKS.

For more details circle NED-3935 on enclosed inquiry slip

SYNTRON
DEPENDABLE
ELECTRIC HAMMERS

Speed Up

Drilling—Cutting—Chipping in concrete and masonry

3600 powerful blows per minute.

Light socket operation

Write for folder

SYNTRON CO.
405 LEXINGTON
HOMER CITY, PA.

For more details circle NED-3936 on enclosed inquiry slip

CHANGE PUNCH PRESS JOBS

1. Remove unwanted punches

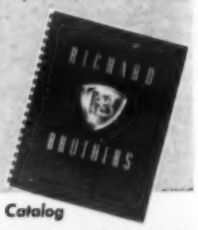
As Easy As This

2. Insert punches for next job

with R-B Interchangeable Punches and Dies

When you have similar parts to pierce, each requiring a few changes in hole size, shape or location, you can produce them all from one die set—using R-B punches and dies. Time to switch production: only a few minutes.

R-B retainers can hold large punches for one job, small punches for another; round punches for one, square for another; or, can be left blank if no hole is wanted. In addition to these savings, you get all the other proven advantages of R-B interchangeability.



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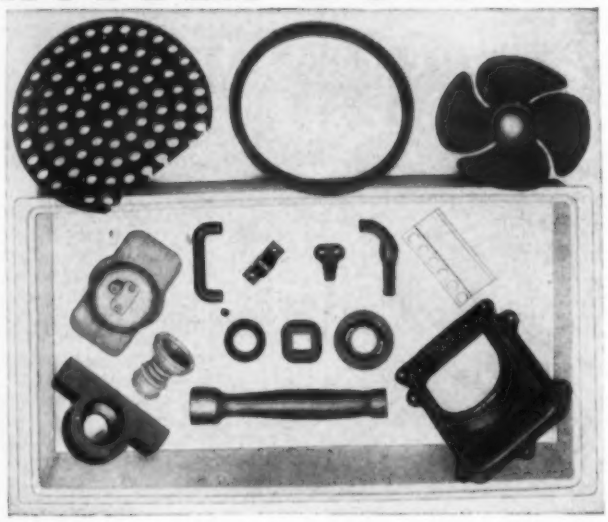
ALLIED PRODUCTS CORPORATION

Department 44
12629 Burt Road • Detroit 23, Michigan

For more details circle NED-3937 on enclosed inquiry slip

RUBBER DOES IT!



Only rubber does that job so vitally necessary in countless applications—resists the damaging action of oils, gases, fluids, greases, continuous flexing, abrasion, extreme high and low temperatures, and many other problem conditions. Throughout Industry, Acushnet precision-molded rubber parts and products of natural and synthetic rubber are performing their jobs with the greatest efficiency and economy. We'll gladly suggest remedies for your troublesome applications.

Acushnet
PROCESS COMPANY
NEW BEDFORD, MASS., U. S. A.

Address All Correspondence to 782 Belleville Ave., New Bedford, Mass.

For more details circle NED-3938 on enclosed inquiry slip

IMPROVE THE QUALITY OF YOUR ELECTRICAL WIRING and LOWER COSTS AT THE SAME TIME

THE secret of a dependable circuit is its termination. Like the proverbial chain, the wiring is only as strong as its weakest link—and a poor connection can be that link!

That's why design engineers insist on AMP Solderless Terminals in their blue prints for appliances, electrical and electronic equipment, control panels, instruments, communication systems, machine tools, aircraft and railway wiring—in fact wherever there is a termination problem.

Write for full information about AMP PRE-INSULATED Solderless Terminals, self-inspecting tools, and automatic machines.

AMP

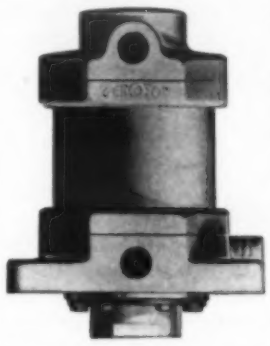
AIRCRAFT-MARINE PRODUCTS INC.
1317 N. FOURTH STREET, HARRISBURG, PA.

Sole Canadian Representative: F. Manley & Sons, Ltd., Toronto, Ont., Canada

For more details circle NED-3939 on enclosed inquiry slip

HYDRAULIC CYLINDERS employ double-size piston rod

Adaptable to variety of hydraulic circuits, Gerotor 2:1 cylinders are particularly suited to such equipment as injection molding machines and hydraulic presses. Since piston rod has twice diameter of standard size, it reduces by its additional area the oil displacement within cylinder, permitting rod to retract at twice speed at which it extends. This speed-up shortens cycle time and reduces size of motor and pump required. Unit is supplied in ten bore diameters, in any length stroke up to 96 in. and with cushioning at either or both ends of piston rod. Rod-and-flange, foot, trunnion, center-line, blind end flange and clevis mountings are obtainable. Made by **Rivett Lathe & Grinder, Inc.**, Dept. NEP 2, Brighton 35, Boston, Mass.



For more details circle NED-3940 on enclosed inquiry slip

INSULATION TESTER provides steady dc test voltage

Usable for diagnosing trouble in all types of electrical equipment, Megger constant-voltage insulation resistance tester is available with ohm scale and selector switch in ranges of 0 to 10, 0 to 20 and 0 to 50 megohms. In addition to retaining features of Midget type tester, it incorporates improved generator, flush terminals and durable plastic case. Slip clutch or centrifugal governor built into driving mechanism permits cranking at varying speeds without effect on voltage output of instrument. Made by **James G. Biddle Co.**, Dept. No. 31-35-20, 1316 Arch St., Philadelphia 7, Pa.

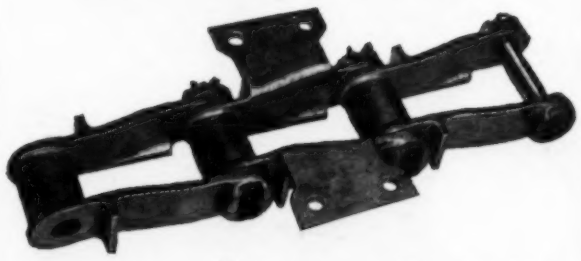
For more details circle NED-3941 on enclosed inquiry slip

WIRE CODE MARKER withstands 400° F temperature

Highly resistant to solvents and high temperatures, this wire code marker features thermosetting bonding agent combined with heat resistant glass-cloth backing material. It possesses high dielectric strength and has electrolytic corrosion factor of 0.95. Markers are supplied on convenient carrying cards which protect them against dust and dirt and afford ease of application. They can be manufactured to special size, symbol, code and color specifications. Made by **Western Lithograph Co.**, E-Z Code Div., 604 E. Second St., Los Angeles 54, Calif.

For more details circle NED-3942 on enclosed inquiry slip

IN RECENT TESTS THIS CHAIN OUTLASTED MALLEABLE IRON CHAIN BY 20 TO 1!



Send us your problem. If, after investigation, our engineers cannot guarantee that Beaumont Beaucalloy Elevator Chain,* above, will save you money, we will not recommend its use.

A new Bulletin, 10-B, is available upon request.

Beaumont BIRCH COMPANY
1514 RACE STREET • PHILA. 2, PA.

DESIGNERS • MANUFACTURERS • ERECTORS • BULK MATERIAL HANDLING SYSTEMS

For more details circle NED-3943 on enclosed inquiry slip

NOW a much better product and for LESS Money!

DOT-SO Hand Cleaner

USE WITHOUT WATER

DOT-SO cleans more thoroughly because this gentle, lanolized cream is ammoniated. Cleans hands in a flash. DOT-SO cleans when other "cleaners" fail! Just rub on and wipe off.

INSTANT ACTING

Ideal for all employees—especially maintenance men, painters, electricians, textile workers, chemists, printers, etc. They can clean their hands now without leaving their work. A boon to car and truck drivers, too. (Available in 5 oz. tubes and 1 lb. glass jars.)

Also works like magic on floors — to remove shoe marks; dirt on metals, porcelain, woodwork and furniture.

DOT-SO Used by National Cash Register Co., Quality Spring Products, Carbit Paint Mfg. Co., Uarco, Inc., and many others

DOT-SO COSTS LESS DOES MORE

Send for TRIAL SAMPLE

of DOT-SO with details and industrial price list. Enclose 25c to cover packing and postage.

CHEMICAL ENTERPRISES
Wholesale Division
1275 W. EARLY AVE., CHICAGO 40

AGENTS WANTED . . . GIVE DETAILS

For more details circle NED-3944 on enclosed inquiry slip

Simple—Accurate—

WEIR METERS

for Waste Measurement

● Float-and-cable Weir Meters developed by Foxboro offer simple, accurate measurement of liquid flow. Widely used in sewage, chemical processes, and industrial waste disposal.

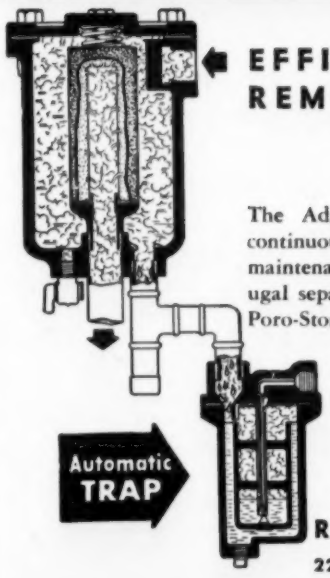
The Foxboro Weir Meter is extremely simple. Operates through motion of float to measure head through V-notch, rectangular or Cippoletti weirs — or Parshall flumes. Motion is transmitted by cable to accurate recording and for integrating mechanisms. Direct-reading, **uniform flow scale** — copper or plastic-covered floats.

Write for detailed information. **The Foxboro Company, 134 Neponset Ave., Foxboro, Mass., U. S. A.** Also Montreal, Canada. Branches in principal cities.

FOXBORO Reg. U.S. Pat. Off. WEIR METERS

For more details circle NED-3945 on enclosed inquiry slip

Poro-Stone Filtration FOR COMPRESSED AIR



EFFICIENTLY REMOVES:

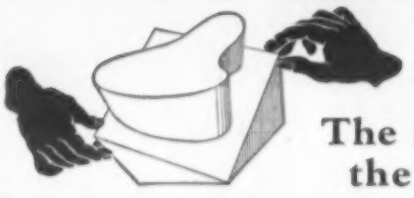
OIL, WATER PIPE SCALE

The Adams *Poro-Stone* Filter gives continuous service without attention or maintenance expense. Efficient centrifugal separation *plus* diffusion through Poro-Stone, removes contamination completely without pressure loss. Automatic Trap eliminates attention and assures continuous and efficient filter operation. Write for complete data—Bulletin 105.

R. P. ADAMS CO., INC.
227 E. Park Dr., Buffalo 17, N. Y.

ADAMS *Poro-Stone* AIR FILTER

For more details circle NED-3946 on enclosed inquiry slip



The shape's the thing...

The selection of a suitable steel and its subsequent satisfactory performance can be made easy by good design.

How and in what shape a part is made is, we hold, of fundamentally greater importance than of what it is made.

In designing a piece of machinery it is necessary to consider Design, the choice of steel, and its Heat Treatment. All three are highly significant factors, but of them we believe Design to be vital because even the best in steel and treatment will not save a poorly designed part.

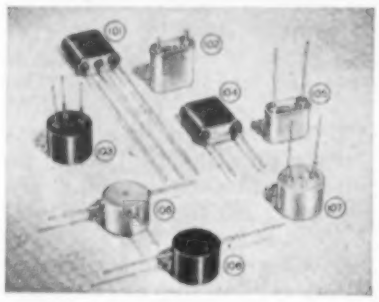
To evaluate the importance of good design and its vital relationship to the selection of steel and its heat treatment, we have prepared a book—"Three Keys to Satisfaction". This starts by discussing mainly design factors involved in stress concentrations, and includes useful sketches comparing poor and good features of design from the aspect of subsequent metallurgy. It is available on request to all engineers and designers.

This booklet sent to you FREE

Climax Molybdenum Company
500 Fifth Avenue · New York City

▲ For more details circle **NED-3952** on enclosed inquiry slip ▲

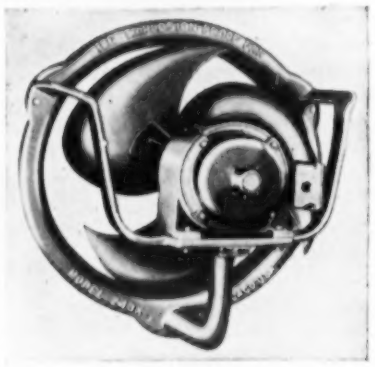
BIMETAL THERMOSTATS
disk, strip and alarm types offered



Hermetically-sealed in corrosion-resistant metal enclosure, these bimetal thermostats operate at temperatures from −60 to 600° F. They are designed for use in radio and electronic apparatus, electrical instruments, cameras and other precision devices subjected to dust, moisture or corrosive atmospheres. Terminals are sweat-soldered into inert metal tubes interfused with glass insulator bead enclosure. Bimetal control element eliminates artificial cycling. Thermostats are available in bright-plated or dull-black finish with conventional or special terminal arrangements. Made by **Stevens Mfg. Co.**, Dept. B, 69 S. Walnut St., Mansfield, O.

▲ For more details circle **NED-3954** on enclosed inquiry slip ▲

EXPLOSIONPROOF PROPELLER FAN
for class I group D locations



Suitable for static pressures up to ½-in., type X explosionproof propeller fan can be used for ventilation in oil refineries, paint shops, chemical plants, dry cleaning establishments and other hazardous areas. It is dynamically balanced and offers large air moving capacity. Eight models are available with one and three-phase ball-bearing motors and are suitable for horizontal or vertical operation. Made by **Ilg Electric Ventilating Co.**, 2803 N. Crawford Ave., Chicago 41, Ill.

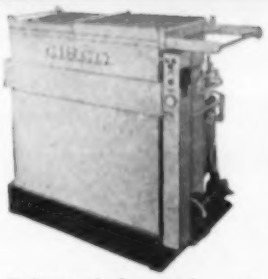
▲ For more details circle **NED-3955** on enclosed inquiry slip ▲

GAS UNIT HEATER
is automatic and self-contained

Easy accessibility to interior for servicing is feature of this compact gas unit heater. It can be added to existing installations to deliver instant warmth or restrict heat at will without basic alterations of system. All models have Perlite neutral gray-green metallic paint finish. Made by **Reznor Mfg. Co.**, 168 James St., Mercer, Pa.

▲ For more details circle **NED-3956** on enclosed inquiry slip ▲

Can You Afford Outmoded Metal Parts Cleaning?



A CIRCO engineered degreaser gives you

1. Thorough and speedy parts cleaning
2. Safe operation—uses a nonflammable, non-explosive solvent
3. Economy of operation
4. Long life with stainless clad, nickel clad or zinc sprayed construction

Before and after nearly every production operation in the metal working industry, a cleaning operation must be performed. Are you risking high production costs with outmoded cleaning methods?

Circo vapor-spray degreasers eliminate costly, hand-labor operations. *Savings of over 90% in time alone are common.* Not only is valuable time saved but better cleaning is assured. Warm vapor, harmless to all metals, thoroughly penetrates every crack or seam. All traces of dirt, oil and grease are absolutely removed, leaving each part ready for immediate inspection. Depending on size, parts can be removed, *absolutely clean and dry*, in 1 to 15 minutes. Best of all, Circo's fully automatic control system guarantees operating economy.

CIRCO DEGREASERS PAY FOR THEMSELVES

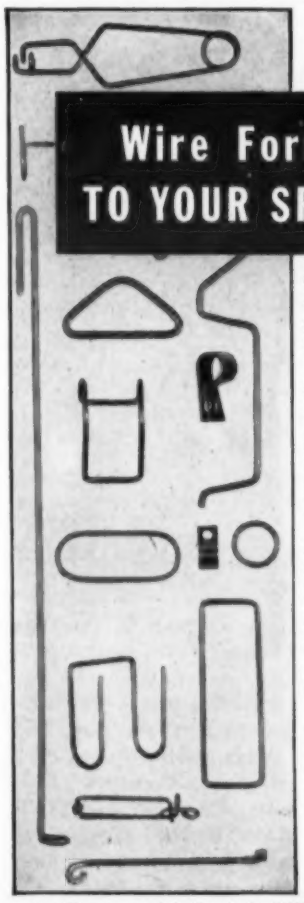
For detailed information send for our catalog covering our standard degreasers. Our engineers will gladly work with you on metal cleaning problems requiring equipment of special design.

CIRCO — **CIRCO PRODUCTS COMPANY**
Metal Cleaning Equipment
6531 EUCLID AVE. • CLEVELAND, OHIO

PIONEERS IN THE DEVELOPMENT OF HOT VAPOR CLEANING EQUIPMENT

▲ For more details circle **NED-3958** on enclosed inquiry slip ▲

Wire Forms Finished TO YOUR SPECIFICATIONS



● Now, Sommer is equipped to handle *your* wire forms—in a wide variety of attractive finishes.

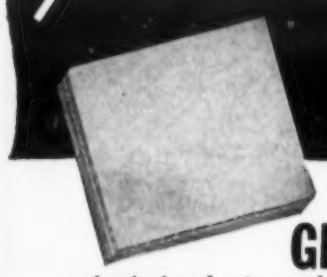
We have installed fast, automatic nickel-plating equipment for either large or small assemblies. Also, if you want cadmium or zinc plating, bonderized enamel, parkerized or copper-coated finishes—you can count on Sommer.

Complete forming, stamping, cut-threading and butt-welding of light metal parts are also among our services. Whatever your problem, you can save time and money if Sommer handles the *complete* job. Just send sample, blueprint or drawing.

SOMMER METALCRAFT CORPORATION
(*Formerly JESCHKE Wire and Specialty Company*)
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ For more details circle **NED-3959** on enclosed inquiry slip ▲

Investigate... GPX



GPX... Georgia-Pacific's plastic-faced plywood, is working production miracles in plants, in products and in construction. Its unique properties include: a satin-smooth, armor-hard surface, extra strength and long life under adverse conditions.

A Few of the Many Uses for GPX:

Use it in INDUSTRY:
- counters
- inspection tables
- chutes
- shelves and bins
- lockers
- freight car exteriors
- work benches

Use it for CONSTRUCTION:
- concrete forms
- interior walls
- exterior walls

Use it for FURNITURE:
- game room tables
- laundry hampers
- occasional tables
- bookshelves
- display booths
- advertising sets
- interior decorations

Use it in the HOME:
- outdoor furniture
- kitchen cabinets and counters
- window boxes
- cellar and sliding doors

GPX is Weatherproof
GPX is Water Resistant
GPX is Abrasion Resistant
GPX is Stain Resistant
GPX is Vermin Resistant
GPX is Smooth
GPX is Extra Strong
GPX is Workable
GPX is Durable
GPX is Attractive

GEORGIA—PACIFIC
PLYWOOD & LUMBER CO.
Wholesale Distribution Yards in BOSTON • NEWARK PHILADELPHIA • CHICAGO

For complete data, fill in and mail this coupon *today*

Georgia-Pacific Plywood & Lumber Co.,
1258 Southern Finance Building,
Augusta, Georgia.
Please send me **GPX** Use Folder.
NAME.....
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FIRM ADDRESS.....
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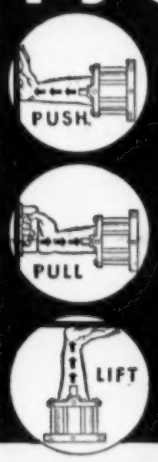
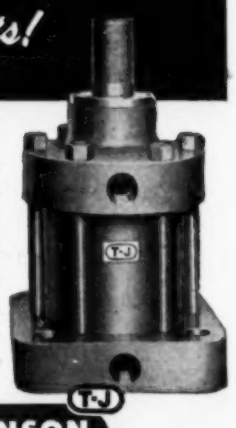
POSITION.....

▲ For more details circle **NED-3953** on enclosed inquiry slip ▲

T-J CYLINDERS



Save Labor!
Speed Production!
Cut Costs!



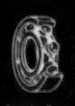
T-J Air and Hydraulic Cylinders are built for 1001 tough jobs in industry ... where pushing, pulling or lifting is needed ... 100 lb. or 50,000 lb. Available in many standard sizes and styles ... both cushioned and non-cushioned types. Backed by 32 years' experience ... built for long-life dependability. Write for latest catalogs. The Tomkins-Johnson Co., Jackson, Michigan.

TOMKINS-JOHNSON
RIVETERS · AIR AND HYDRAULIC CYLINDERS · CUTTERS · CLINCHERS

▲ For more details circle **NED-3957** on enclosed inquiry slip ▲

AHLBERG

BALL BEARINGS
ROLLER BEARINGS
THRUST BEARINGS AND
BALL BEARING HOUSINGS


Single Row

Pillow Block

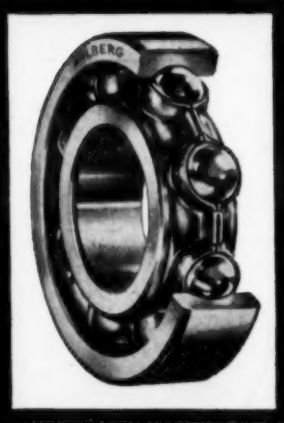
Engineered to the Bearing Industry's Highest Standards of Uniformity, Quality and Performance

Double Row

Take-up Unit

Self-Aligning

Flange Unit



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3825 WEST 47TH STREET, CHICAGO 32, ILLINOIS • DISTRIBUTORS IN ALL PRINCIPAL INDUSTRIAL AREAS
PRECISION CRAFTSMEN SINCE 1908

▲ For more details circle **NED-3960** on enclosed inquiry slip ▲

HOT? COLD?

Titeflex ALL-METAL FLEXIBLE TUBING

withstands heat to 1650°F.

Titeflex tubing is made in 5 metals, to solve any problems of heat, cold or corrosion in handling gases or liquids. It *lasts longer* because it's all-metal . . . does not depend on packed sliding joints for flexibility. The Titeflex catalog gives full details, and our engineers are ready to assist you, without obligation. *Write us.*

Titeflex, Inc. 500 Frelinghuysen Avenue NEWARK 5, NEW JERSEY

TITEFLEX STAYS TIGHT WHEN THE GOING IS TOUGH

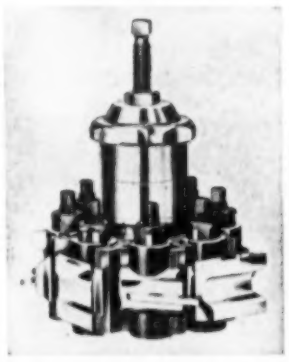
For more details circle NED-3961 on enclosed inquiry slip

AIR NOZZLE
has two-stage throttling action

Positive control of air volume is afforded by this air nozzle for removing chips, dirt, sand or other deposits from machines, benches, castings, etc. For nine-tenths of travel of poppet control button, only small volume of air is allowed through; then full blast is emitted as travel is completed. Nozzle is line-pressure-sealed and has ball-bearing swivel to prevent kinking of hose. Made by **Supereme Machined Products Co.,** Dept. SMPCO, Spring Lake, Mich.

For more details circle NED-3964 on enclosed inquiry slip

WOODWORKING CUTTERHEADS
feature circular type bit clamps



Recommended for cutting shiplap, tongue and groove, sash and doors, series 200 cutterheads are provided with micrometer lateral adjustment that permits bit tracking for accurate setting. All adjustments are made from one side of head, and positive bit clamping prevents shifting. Design is such that periphery of head is unbroken, and several bits can be located in small cutting circle. Made by **Yates-American Machine Co.,** 731 Third St., Beloit, Wis.

For more details circle NED-3965 on enclosed inquiry slip

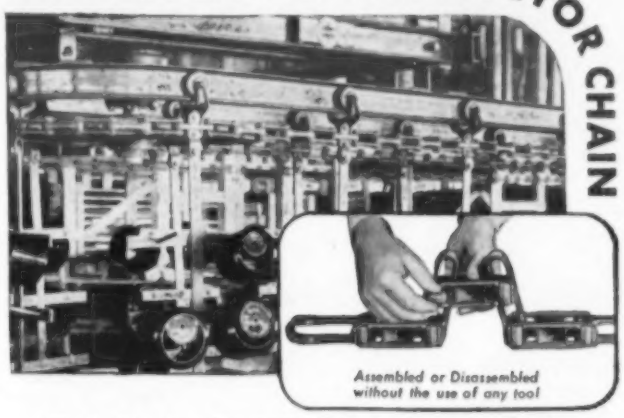
PORTABLE HYDRAULIC CUTTER
cuts large diameter chain and rod

Rated at 22½ tons thrust, Guillotine model 20-D has capacity for quick cutting of reinforcing rod, stainless steel and Monel rod of ¾-in. diameter; 1-in. mild steel rod; 1-in. soft chain and ¾-in. hard chain. Open C-frame anvil will also accommodate hexagonal and square material.

Basic cutting unit is available with any of four pump units. Illustrated cutter has air-hydraulic pump that operates from 100-psi compressed air source. Electric-hydraulic pump unit, separate manually operated pump for nonpositional use in field, or integral hand pump can be supplied. Other cutters are available also for 1¼-in. wire rope and electric cable up to 3½ in. OD. Made by **Manco Mfg. Co.,** Washington St., Bradley, Ill.

For more details circle NED-3966 on enclosed inquiry slip

THE BEST BUY IN A CONVEYOR CHAIN



Webb Rivetless Keystone Chain is Drop Forged from high carbon steel and heat treated for extra strength.

Developed by Jervis B. Webb Co. in the early 1920's for overhead conveyor use, this type of chain is now used in 90% of all overhead conveyors.

It is strong, flexible and economical—easy to install and replace. Available in 2", 3", 4" and 6" pitch.

Write for valuable engineering catalog on Webb chain and other parts that make a complete overhead trolley conveyor.

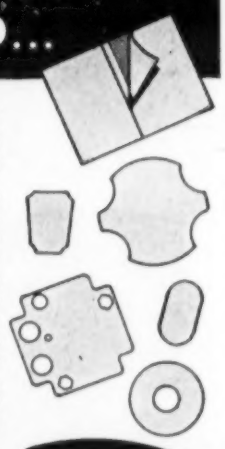
JERVIS B. WEBB COMPANY — MANUFACTURERS OF OVERHEAD AND FLOOR TYPE CONVEYORS

OFFICES IN PRINCIPAL CITIES
8921 ALPINE AVE.
DETROIT 4, MICH.

For more details circle NED-3968 on enclosed inquiry slip

NEW! BRADY MASKS

Die-Cut to Sizes and Shapes You NEED...



Self-adhesive **BRADY MASKS** will save you time and dollars in spray-painting, tumbling and sand-blasting operations. ***Die-cut to the exact shape and size you require,*** form-fitting **BRADY MASKS** *protect* name plates, machined parts, plated and polished sections, holes, threads, and other areas from paint, plating solutions and damage. They eliminate costly hand cutting, use of stop-off materials, and expensive metal shields. Made from "Scotch" Brand Masking Tapes, they are fast to apply and fast to remove after use. Low in cost, **BRADY MASKS** will bring immediate worthwhile savings to your plant. Circles, squares and rectangles **stocked in many sizes.** Write today for useful literature and **FREE SAMPLES.**

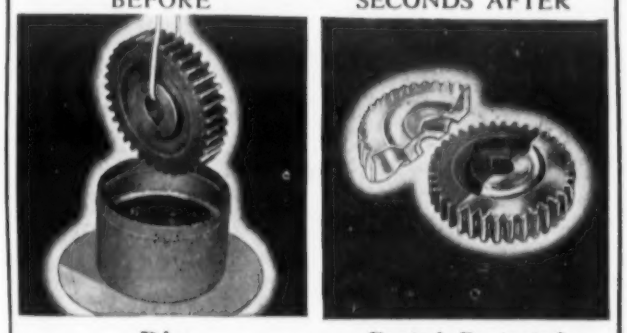
BRADY-MILWAUKEE CO.
(Div. of W. H. Brady Co., Chippewa Falls, Wis.)
212 W. Washington St., Milwaukee 4, Wis.

FREE SAMPLES

For more details circle NED-3962 on enclosed inquiry slip

HOT MELT PLASTIC COATINGS
for GEARS • TOOLS • PRECISION PARTS

BEFORE SECONDS AFTER



Dip Coated • Protected

DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

Write for Bulletins and Free Samples
Fidelity Chemical Products Corp.
470 Frelinghuysen Avenue, Newark 5, N. J.

For more details circle NED-3969 on enclosed inquiry slip

★ This is a simple formula, easily applied. Wellman's *40 years' experience* are yours for the asking. *Quality Castings* in magnesium, aluminum or bronze produced to your exact specifications. Our *three plants* are completely equipped for production from blueprint to finished casting. *Well-Cast lightweight* castings are being produced every day for the aircraft, automotive, rubber goods, portable tool, textile, and other industries. What are your requirements? Catalog No. 50 on request.

* Aluminum and magnesium + Wellman's 40 years' experience equals quality castings.

"WELL-MADE" WOOD AND METAL PATTERNS

THE WELLMAN BRONZE & ALUMINUM CO.

2516 EAST 93rd STREET ★ CLEVELAND 4, OHIO

For more details circle NED-3963 on enclosed inquiry slip

For more details circle NED-3967 on enclosed inquiry slip

FREE! FLOOR-CARE BOOKLET

● Send today for this 8-page booklet packed with valuable information on all types of floors. Tells you how they're made — how to clean them — protect them — make them wear longer. Answers 101 questions. Saves you time and money! Every plant and office should have one.

MAIL THIS COUPON NOW FOR YOUR COPY!

MASURY-YOUNG COMPANY
76 ROLAND STREET, Dept. A
BOSTON 29, MASSACHUSETTS

Please send me your FREE FLOOR-CARE BOOKLET

NAME ..... (Please print clearly)

STREET .....

CITY ..... ZONE ..... STATE .....

For more details circle NED-3970 on enclosed inquiry slip

Be fresh... stay fresh

wear a DUPOR No. 20
Water-Cooled Respirator

Double sponges dipped in water before wearing provide cool breathing even under hot, smoky conditions. Recommended for use of workers in paint shops, foundries, steel mills, oil refineries, chemists, firemen, etc. Face mask is of rubber, equipped with DUPOR "controlled breathing" valves. Wearer has a panorama view with no blind spots. Glasses or goggles can be worn with unit.

Sample sent $2.25 pp

H. S. COVER
South Bend, Ind.

For more details circle NED-3971 on enclosed inquiry slip

HOLES ANY SHAPE ARE PUNCHED WITHOUT SPECIAL DIES

NEW FAST METHOD

- PUNCHES OPENINGS UP TO 12" x 4½"
- FASTER THAN ANY OTHER LOW COST METHOD
- ANYONE CAN OPERATE IT
- PUNCHES STEEL UP TO ⅛" THICK

Write for complete information to SEMCO

SERVICE MACHINE COMPANY, INC.
202 MILLER STREET, ELIZABETH 4, N. J.

For more details circle NED-3972 on enclosed inquiry slip

..a new floor in 48 hours

TROWELED ON WITH Plastic Rock

Renew spalled concrete and old wood floors easily and quickly with this "job-tested" floor resurfacer. Perfect for general factory and institutional floors, corridors, steps, loading docks, trucking aisles, etc. Plastic Rock is unequalled in quality—unmatched in performance.

UNITED LABORATORIES, INC.
16804 Euclid Avenue, Cleveland 12, Ohio

Please send me without obligation the Plastic Rock story.

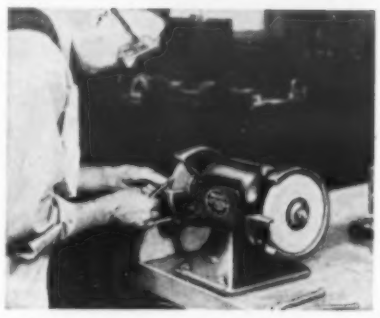
NAME.....

ADDRESS.....

CITY.....ZONE.....STATE.....

For more details circle NED-3973 on enclosed inquiry slip

BENCH GRINDERS
feature extra-large work clearance



Designed to facilitate handling of large and bulky pieces, Skil bench grinders afford accessibility to grinding wheels. Full clearance for difficult jobs is provided by 'flat-faced' ¼ and ⅓-hp models supplied with 6-in. wheels. They employ split-phase motors for quick starting and smooth running. Capacitor-start motors are utilized on ½ and 1-hp types which are equipped with 7 and 10-in. wheels, respectively. All models have permanently lubricated ball bearings and are totally enclosed. Heavy-duty cast wheel guards and tool rests can be removed or adjusted easily. Made by **Skilsaw, Inc.**, 5027 Elston Ave., Chicago 30, Ill.

For more details circle NED-3974 on enclosed inquiry slip

LOADING PLATE
is positioned by two lever arms

Consisting of reinforced checkered Jal-Tread floor plate housed in built-in rack in loading platform, Easyload transfer plate is part of floor when not in use. By means of lever arms, it is lifted and projected into loading position on truck or railroad car. Plate is held firmly in position by two pivot arms that prevent shifting or slipping. Transfer plate is manufactured by Wm. Christensen Co.; Jal-Tread floor plate is made by **Jones & Laughlin Steel Corp.**, 556 Jones & Laughlin Bldg., Pittsburgh 30, Pa.

For more details circle NED-3975 on enclosed inquiry slip

ELECTRIC ROTARY ACTUATOR
static capacity exceeds 1500 lb-in.

Suitable for use on either low voltage direct current or 110-v ac, Trim Trol electric rotary actuator has been redesigned in more compact form weighing 2¼ lb. Standard gear ratio produces 350-lb-in. operating torque through 180-degree maximum rotation. Unit incorporates zero backlash output, magnetic brake, built-in externally-adjustable limit switches and potentiometer and radio noise filter. Accurate positioning or electrical synchronizing controls are obtainable, and provision for mechanical synchronizing in pairs is optional. Made by **Airborne Accessories Corp.**, 25 A Montgomery St., Hillside 5, N. J.

For more details circle NED-3976 on enclosed inquiry slip

Here's one profitable MILK RUN!

BUSCHMAN CABLE TROLLEY CONVEYORS are a low cost easily installed profit boon to processing plants. A mid-western dairy *conveys* milk cans from sterilization to filling stations or storage—freeing floor space and utilizing unused ceiling space. Can denting is reduced, sanitation increased while trucks and other handling devices are eliminated.

To reduce handling and increase profits in *your* plant—investigate BUSCHMAN "UNIVERSAL" Trolley Conveyors. Write for Bulletin #41.

THE E. W. BUSCHMAN COMPANY INC.
Spring Grove at Winton Place
Cincinnati 32, Ohio

Buschman Conveyors

For more details circle NED-3977 on enclosed inquiry slip

IT'S EASY TO See HOW YOU SAVE MONEY! with

SEALMASTER BALL BEARING UNITS

● Ask a SealMaster bearing engineer to call and actually show you the combination of features offered exclusively by SealMaster. The cut-away pillow block he carries is a complete demonstration of SealMaster's major advantages.

★ *Permanently Sealed* . . . to exclude dirt and retain grease.
★ *Self-Aligning* in any direction without seal distortion.
★ *Pre-Lubricated* at the factory—ready for use on installation

Write for Catalog 845 which gives dimensions and load ratings on the complete SealMaster line.

★ SealMaster ball bearings are available in Pillow Blocks, Flange Units, Hanger Units, Cartridge Units, Flange-Cartridge Units and Take-Up Units.

BEARING DIVISION
STEPHEN S-ADAMSON Mfg. Co.
12 Ridgeway Ave., Aurora, Ill. Los Angeles, Calif. • Belleville, Ont.

Factory Representatives and Dealers in All Principal Cities

For more details circle NED-3978 on enclosed inquiry slip

for easier MATERIALS HANDLING

STRONG!
TOUGH !!
LIGHT !!!

TRUCKS & TOTE BOXES

You can't get more wear or longer life from any other type of tote box or truck, than you get *built right in* these lightweight, vulcanized and reinforced

BAL PLASTIC FIBRE PRODUCTS

So light that girls can handle them loaded with lightweight parts; sturdy enough to carry heavy parts and defy constant usage and drudgery. Double-strength corners; steel "elbows" to ward off damage. Hard smooth surfaces with no rough edges. Made in all sizes. Catalog shows many types of trucks; tote boxes for many industrial needs. *Send for details!*

"BAL" BUILT WITH A CONSCIENCE

WILLIAM BAL CORPORATION
11 Johnson Street, Newark 5, N. J.

For more details circle NED-3979 on enclosed inquiry slip

Made-to-fit ELECTRIC STRIP HEATERS by WATLOW

Adaptable Shapes Prevent Heat Waste

Write for Electric Heating Catalog.

For simple warm-up—or sustained high heat—Watlow strip units prove more efficient because they're "tailored" to your jobs . . . in a wide variety of curved, flat and irregular shapes and sizes . . . and with voltage or wattage to fit your specifications.

Send blueprint or pencil sketch of your job—plus outline of heating requirements. We'll be happy to send you a prompt suggestion and quotation.

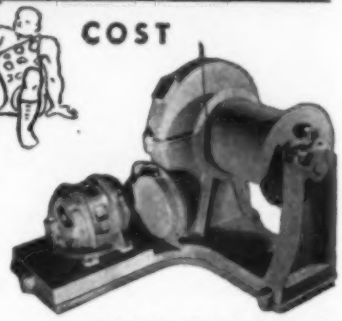
SPECIALISTS IN ELECTRIC HEATING UNITS

WATLOW ELECTRIC MANUFACTURING COMPANY
1314 N. 23d St. St. Louis 6, Mo.

For more details circle NED-3980 on enclosed inquiry slip

S-A WINCHES
Save time and men

AT LOWEST COST

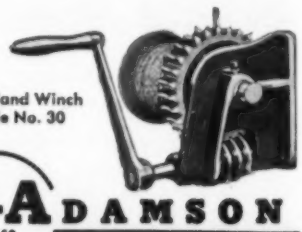


S-A Motor Winch Style No. K5

Don't take high-pay men from their regular jobs to lift or move heavy loads. It saves time and money to do most lifting and pulling jobs with an S-A Winch.

One man—with a hand winch—can lift as much as a ton—up to 3,000 pounds with an S-A Motor Winch. *Cut operating costs this economical way!*

Write for Winch Bulletin 340 and consider possible savings.



S-A Hand Winch Style No. 30

STEPHEN S-A ADAMSON MFG. CO.

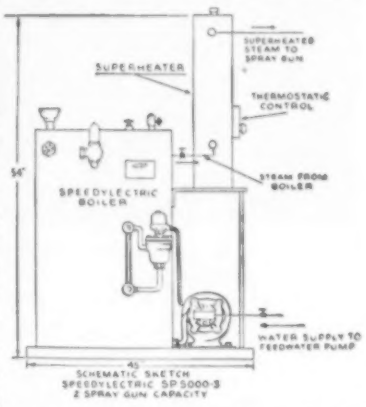
Tellevel Bin Level Controls • Car Loaders
SACO Speed Reducers Car Pullers • Winches
SealMaster Ball Bearings

12 Ridgeway Ave., Aurora, Illinois

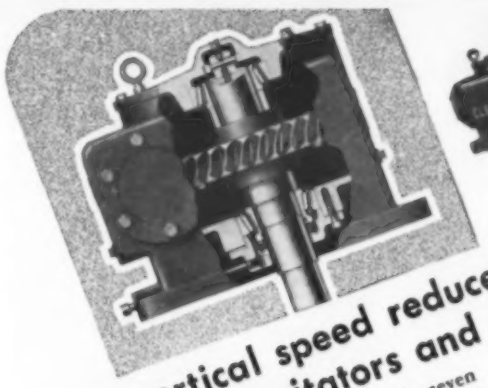
For more details circle **NED-3981** on enclosed inquiry slip

ELECTRIC STEAM BOILER
for use in steam-spray painting

Self-regulator control of Speedylectric SP500 steam power plant maintains electric input in exact balance with steam output. It is usable for recently developed steam-spray painting process which features one-pass application and less overspray and lower finishing costs than conventional methods. Available in capacities to accommodate from one to ten or more spray guns, boiler operates on 220, 440 or 550-v ac single or polyphase. Plant is furnished complete with built-in 100-psi boiler which is ASME code, National Board inspected and stamped, and Underwriters' Laboratories listed. Other equipment includes electric superheater with thermostatic control and boiler feed pump, motor and controls. Made by **Livingstone Engineering Co.,** Dept. 187, 100 Grove St., Worcester 5, Mass.



For more details circle **NED-3984** on enclosed inquiry slip



Type ND, with drive shaft down

A new vertical speed reducer to drive agitators and mixers

IMPROVED worm gear drive—in seven sizes each of two types—ready for prompt delivery. Designed especially for agitators and mixers, and for use with supplementary low-speed spur gear drives, without requiring outboard bearings. WRITE FOR BULLETIN 125, describing types NU and ND, with capacity charts and dimension data. The Cleveland Worm & Gear Co., 3283 East 80th St., Cleveland 4, Ohio.

CLEVELAND Worm Gear *Speed Reducers*

For more details circle **NED-3988** on enclosed inquiry slip

A RECORDING MECHANICAL COUNTER
Actuated by an Electrical Impulse

it operates on the output of a scaler, photo tube, or other electrical unit . . permanently records counts on a 2¼" tape . . . automatically resets to zero.

In Radioactive Research it saves precious time by eliminating many hours of manual labor, resulting in greater economy and efficiency.

In industry it maintains a permanent record automatically, recording production and time each hour.

Write for complete information and illustrated circular S C 15

STREETER-AMET COMPANY
AUTOMATIC WEIGHT RECORDERS & SCALES
HIGH SPEED COUNTERS SINCE 1888
4101 Ravenswood Ave., Chicago 13, Illinois

For more details circle **NED-3982** on enclosed inquiry slip

WIDE-FIELD MICROSCOPE
can withstand rough handling

Wide - field 20 - power model S-186 industrial microscope is useful where close and accurate checking of details is required such as on castings, machined threads, surface finishes, welds, textiles, raw materials and fibers. Since it can be angled in any direction and raised and lowered on heavy base to accommodate pieces up to 12 in. high, it is particularly suitable for work in difficult places. Fine focus adjustment is obtained by means of built-in helical focusing eyepiece. If desired, microscope tube can be supplied without stand for bench mounting. Objective is achromatic and mounted in its own cell with standard threads so that it is interchangeable with any standard microscope objectives. Made by **Buhl Optical Co.,** Dept. TN-3, 1009 Beech Ave., Pittsburgh 12, Pa.

For more details circle **NED-3985** on enclosed inquiry slip

DO YOU KNOW? "The S-A Conveyor", a quarterly publication devoted to problems and equipment related to materials handling and mechanical power transmission, will be sent regularly to industrial plant executives. Case studies, plant layouts, problem solutions and new equipment are illustrated and described. Issued by Stephens-Adamson Mfg. Co., 12 Ridgeway Ave., Aurora, Ill.

For more details circle **NED-3986** on enclosed inquiry slip

● Put HERC-ALLOY Steel Chain on the toughest job you can find. Let HERC-ALLOY service-experience records give you first hand, the undeniable answers in black and white.

Production executives and safety directors who have used HERC-ALLOY for slings or other applications agree they have yet to find an alloy steel chain superior to HERC-ALLOY.

COLUMBUS McKINNON CHAIN CORPORATION
(Affiliated with Chisholm-Moore Hoist Corporation)
GENERAL OFFICES AND FACTORIES: TONAWANDA, N. Y.
SALES OFFICES: NEW YORK • CHICAGO • CLEVELAND • SAN FRANCISCO
Other Factories at Angola, New York, St. Catharines, Ontario and Johannesburg, S. A.

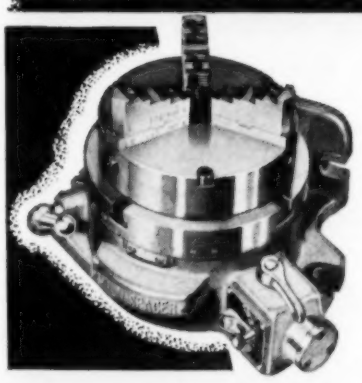
For more details circle **NED-3989** on enclosed inquiry slip

GENERAL BOX COMPANY .. ★★★★★ *engineered shipping containers*

GENERAL OFFICES: Illinois & Dearborn Sts., Chicago 10, Ill.
DISTRICT OFFICES AND PLANTS: Cincinnati, Denville, N. J., Detroit, East St. Louis, Kansas City, Louisville, Milwaukee, Sheboygan, Winchendon. Continental Box Company, Inc., Houston, Dallas. General Box Company of Mississippi, Meridian, Miss.

For more details circle **NED-3983** on enclosed inquiry slip

New Indexing Fixture with Built-in Selector



THE NEW GORTON Multi-Spacer

A time-saver for all types of milling, drilling, boring and grinding operations. Eliminates extra job set-ups. Features built-in automatic selector; permanent index discs; no loose parts — no discs to change; 9" dia. table; sealed mechanism; vertical or horizontal set-up; milled base for ½", ⅝" or 11/16" keys. Available with seven positions . . . 2, 3, 4, 6, 8, 12 and 24 divisions.

FREE BULLETIN!

For detailed information on the Multi-Spacer and numerous other Gorton Time-saving Machine Tool Accessories write today for Free Bulletin No. 1317.

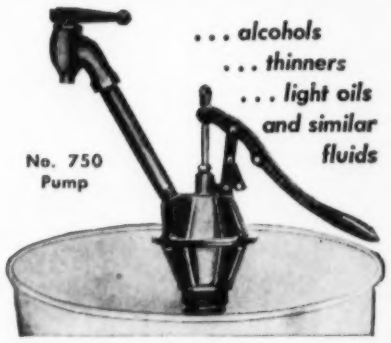
GEORGE GORTON MACHINE CO.
1906 RACINE ST., RACINE, WISCONSIN

For more details circle **NED-3987** on enclosed inquiry slip

NEW! FOR VOLATILE LIQUIDS

Long Life provided by nylon diaphragm

Leak Proof with positive shut off in fell spout



No. 750 Pump

. . . alcohols
. . . thinners
. . . light oils and similar fluids

Fast pumping with less effort. Short strokes, large volume—up to 15 gallons per minute.

Trouble-free simplicity. No cylinders, pistons, rings or leathers. Valves are iminated bakelite, valve springs are bronze. Dirt or wear cannot cause suction loss. Unaffected by moisture or condensation.

Only $12.75 complete. Shipped on open account.

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GENERAL SCIENTIFIC EQUIPMENT COMPANY
TESTED INDUSTRIAL SAFETY PRODUCTS

2701 W. Huntingdon St., Philadelphia 32, Pa.

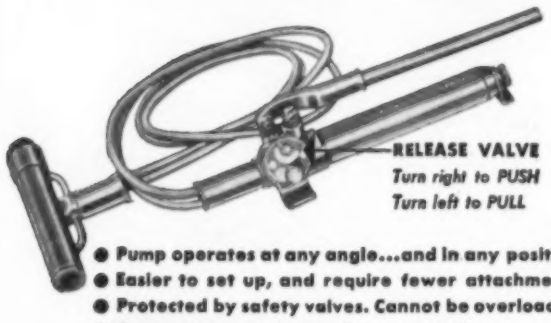
RESPIRATORS • PUMPS • GOGGLES • SHIELDS • GLOVES • APRONS • HELMETS

For more details circle **NED-3990** on enclosed inquiry slip

DIRECT—

TWO-WAY ACTION

...with the NEW Hein-Werner "Push and Pull" Hydraulic Jack



- Pump operates at any angle...and in any position.
- Easier to set up, and require fewer attachments.
- Protected by safety valves. Cannot be overloaded.
- Cannot become airbound at any angle or in any position.
- Available in 4, 10 and 20-ton capacities, with a wide variety of attachments for hundreds of industrial applications.

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORP.
Waukesha, Wis.

For more details circle NED-3991 on enclosed inquiry slip

BINKS

Dynaprecipitor Water Wash
SPRAY BOOTHS

LOCAL & STATE HEALTH AUTHORITIES APPROVED INSURANCE UNDERWRITERS

No other spray booths give you all these advantages:

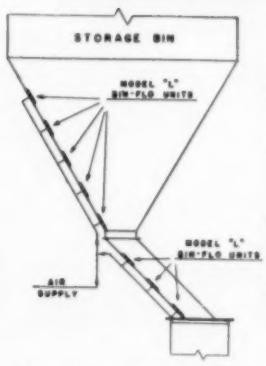
★ Approved performance and construction: These booths meet the requirements of local and state authorities and insurance companies ★ Exhaust air washed 5 times ★ No nozzles to clog ★ Reclamation of over-spray ★ Simplified construction ★ Many standard sizes ★ Economical operation ★ Prices that are right.

Send today for your free copy of **Bulletin 500**
No obligation. Tells all.

Binks MANUFACTURING COMPANY
3122-34 West Carroll Ave., Chicago 12, Ill.

For more details circle NED-3992 on enclosed inquiry slip

BIN-FLO

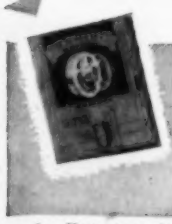


Provides STEADY FLOW of Bulk Materials

New aerating device provides uniform steady flow of most dry finely-ground materials from bins, hoppers, chutes, and silos.

BIN-FLO units are located at points of restricted flow. Low-pressure air supply may be controlled by BIN-DICATORS.

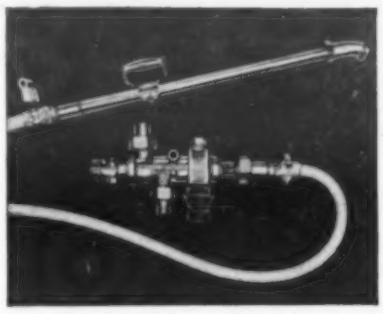
THE BIN-DICATOR COMPANY
14615 E. Jefferson Avenue Detroit 13, Michigan



Please send new 20-page catalog giving complete information and specifications on BIN-DICATORS. Also please send information on BIN-FLO Aerating Units.
Name_____
Address_____
City_____ State_____
D-6

For more details circle NED-3993 on enclosed inquiry slip

HIGH-PRESSURE JET CLEANER for plant and equipment cleaning



Small and compact for wall or post mounting, model B Hi-Pressure jet cleaner permits quick thorough cleaning of plants, treadways, freight cars and machinery. It provides high - temperature large - volume water jet at pressures adjustable up to more than twice plant steam pressure. It consists of venturi-injector mixing chamber which is connected to steam and cold water line, 50-ft length of high pressure hose, cleaning lance and nozzle. Connection and control valve are supplied for automatic addition of detergent or solvent. Made by **Sellers Injector Corp.**, 1631 Hamilton St., Philadelphia 30, Pa.

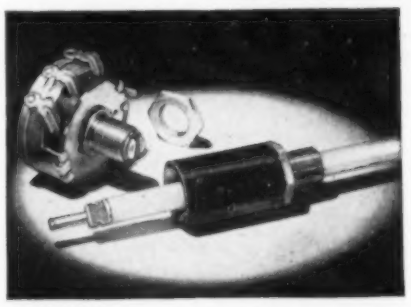
For more details circle NED-3994 on enclosed inquiry slip

DUMP TRUCK SELF-LOADER speeds handling of loose materials

Capable of being installed on most standard trucks, this dump truck self-loader is recommended for use by contractors and industrial concerns. Its installation converts truck into independent working unit and allows driver to do light digging, grading, scooping up of materials, hauling and unloading. Shovel has ½-yd capacity and drop range of 8¼ in. below ground surface, and is operated by balanced vane type hydraulic pump. Made by **Ernest Holmes Co.**, W 2505 E. 43rd St., Chattanooga, Tenn.

For more details circle NED-3995 on enclosed inquiry slip

HIGH-VOLTAGE COUPLER rated at 10,000 v breakdown test



Intended for use in television, oscillograph and other high - voltage circuits, No. 59-186 high-voltage coupler and spacer assembly with nylon insulator shaft is now available in types AM and AT Pick-A-Shaft controls or can be purchased separately. Insulator sleeve screws onto control bushing, while its threaded metal stud end takes mounting nut. Nylon shaft with standard keyed end slips into control's slot and is gently tapped to be snapped firmly and permanently in place for integral control and shaft combination. Made by **Clarostat Mfg. Co.**, Dover, N. H.

For more details circle NED-3996 on enclosed inquiry slip

The "TOTEMASTER"

$990.- AT THE FACTORY ONE TON CAPACITY MODEL OCS-66

POWERED BY A 20 H.P., 4 CYLINDER GAS ENGINE

Indoors or out — this rugged ONE-TON Toter scoots around with loads up to capacity and at speeds up to 20 M.P.H.

- Crosley 4 cylinder engine — 20 HP, CI block — 5 main bearings.
- High compression engine — Ratio 7.8:1. More complete combustion means reduced fuel and less fumes.
- Electric starting. No cranking, therefore operator will stop engine while loading truck. Saves fuel and reduces fumes.
- 3 speeds forward — 1 reverse. Saves strain on engine, increases grade performance with heavy loads. Lowers maintenance cost.
- Two wheel drive — differential. More effective traction. Less wear and tear.
- Water cooled engine — quiet and cooler.
- Hydraulic brakes — airplane type.
- Double handle grip provides one or two hand steering
- When operator leaves seat, parking brake is mechanically applied.

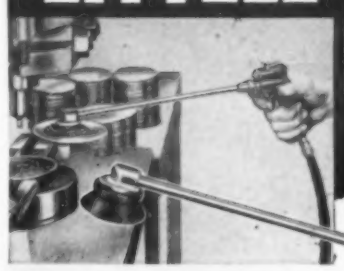
MULTIPLY MANPOWER LEWIS-SHEPARD The "MASTER" Line ®

21 Sq. Ft. of Loading Space, Draw Bar Pull: 1200 lbs.
WRITE for "TOTEMASTER" Bulletin #30

LEWIS-SHEPARD PRODUCTS INC.
REPRESENTATIVES IN PRINCIPAL CITIES
302 WALNUT STREET, WATERTOWN 72, MASS.
Midwest Plant: CRAWFORDSVILLE, INDIANA

For more details circle NED-3997 on enclosed inquiry slip

LITTELL Pres-Vac SAFETY FEEDERS



30 Pres-Vacs cost less than the average cost of only one punch press accident.

Operated by Compressed Air

1 BOOST PRODUCTION 20% to 100% —Reported by Users.

2 ELIMINATE DIE BREAKAGE —Assures Feeding Blanks One at a Time.

3 INCREASE OPERATORS' SAFETY —Punch Press Accidents Eliminated.

4 CUT INSURANCE COSTS —Fewer Accidents Mean Lower Premiums.

Littell Pres-Vac Safety Feeders are made in single and multiple types in a variety of cup sizes and styles.

F. J. Littell MACHINE CO.
4169 RAVENSWOOD AVENUE, CHICAGO 13, ILL.

For more details circle NED-3998 on enclosed inquiry slip

Simplify Your Hose Buying with Hewitt-Robins Servall®

Molded and braided construction makes Servall tough. Synthetic rubber tube resists gasoline and oil; rayon carcass provides a rugged, highly flexible wall; long-wearing synthetic cover resists weathering.

If your plant has many intermittent, light-duty uses for hose, Hewitt-Robins new Servall all-service hose is the efficient, economical answer!

SPECIFICALLY, Servall is recommended for: All types of small air tools; for air cleaning and general air service; hot or cold water service within recommended working pressures; low-pressure spraying and fire-fighting; intermittent gasoline and oil service where the hose is not continuously filled; weak inorganic acids and alkalies and water contaminants; grease, paint (not lacquer) and insecticide spraying.

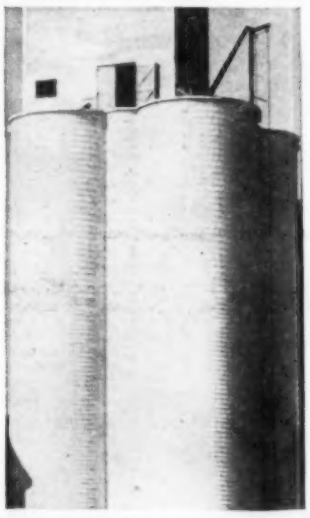
HERE IS MANY-HOSES-IN-ONE; dependable wherever and whenever a special heavy-duty hose is not required. Buy Servall. Buy it by the reel, use it as you need it. Think of the money you save!

BULLETIN 137 gives complete data. Call your Hewitt Rubber distributor (see "Rubber Products" in classified 'phone book) or write Hewitt Rubber Division, 240 Kensington Ave., Buffalo 5, N. Y.

HEWITT-ROBINS SERVALL HOSE

For more details circle NED-3999 on enclosed inquiry slip

THE DECISION OF A LIFETIME



It is literally true that the decision to install Neff & Fry Storage Bins is a lifetime decision, for these Super-Concrete Stave structures can be expected to last beyond the ruling generation.

Many of the N & F Bins erected 30 years ago are now serving the sons of the purchasers. This longevity is due to the endurance of the Super-Concrete Staves. The staves are formed under hydraulic pressure, giving them rocklike density and high compressive strength. They do not rust, rot or burn. They form walls so rugged that heavy machinery is mounted upon them without additional supports. N & F Bins have often withstood tornadoes which destroyed adjacent buildings and uprooted nearby trees.

If you have flowable bulk materials to handle and store, get all the facts about N & F Bins. Our catalog, containing numerous photographs of installations, is yours for the asking

The NEFF & FRY Company
East Central Avenue, Camden, Ohio

NEFF & FRY STORAGE BINS

For more details circle NED-4000 on enclosed inquiry slip

ASK YOUR VICTOR DISTRIBUTOR ABOUT

VICTOR molyflex 1018-006

THE NEW molyflex High Speed HAND HACK SAW BLADES

Your Victor distributor will tell you that this new "Molyflex" . . . when pitted against eight leading competitive blades in cutting treated SAE 52100 ball bearing steel...*averaged 23.8% more metal cut* than all the leading brands tested. He will tell you that this new "Molyflex" . . . an addition to the Victor line . . . has greater uniformity, is absolutely shatterproof and unbreakable when used in a frame.

VICTOR STEELRITE METAL MARKING CRAYONS

Ask your Victor distributor about the new Victor Steelrite Metal Marking Crayons. Available in a variety of sizes, these crayons are made of genuine soapstone. Special extrusion process insures uniform strength and composition. Markings can be made on hot, cold, damp or grimy metal and withstand pickling, yet do not affect enamel application.

Don't forget to ask for a free copy of the Victor Metal Cutting Booklet for your pocket or tool kit and the Victor Wall Chart for your shop. They'll help you get the maximum efficiency from your metal cutting saw blades.

VICTOR

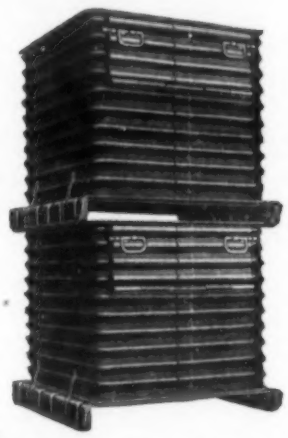
SAW WORKS, INC., Middletown, N.Y., U.S.A.

Makers of Hand and Power Hack Saw Blades, Frames and Band Saw Blades.

For more details circle **NED-4001** on enclosed inquiry slip

ANOTHER TIME-SAVING COST-CUTTING ALL-STEEL MATERIALS HANDLING BOX DESIGNED AND BUILT BY POWELL

Materials handling jobs require individual attention. Powell specializes in special as well as standardized equipment. The pictured Hinged End Door Box Platform was recently delivered to a customer who wanted a stacking box that was easy to work out of even when stacked. The box had to be easy to get to with fork lift trucks yet—to facilitate tiering—have a minimum fork space. Powell met every requirement satisfactorily.



POWELL PRESSED STEEL

SINCE 1920

DEPT. 56, HUBBARD, OHIO
(In Greater Youngstown)

Powell designs and builds all kinds of materials handling containers *from any metal*. If you are not certain you are handling your products economically—call in Powell—*originator of cold formed steel materials handling* equipment.

Bulletin 700 indicates Powell versatility in creating special equipment. Write for it.

For more details circle **NED-4002** on enclosed inquiry slip

NOW!

McGILL Levolier® No. 41

GUARANTEED *Unconditionally*

** Levolier Model 41 6 Amp. "T" rated, 125 volt switch is unconditionally guaranteed when used in lighting circuits. In case of failures a new Model 41 switch will be furnished without charge.*

When you install Levolier Model 41 switches in lighting circuits, you've installed the switch that will not fail. No kickbacks or complaints. Just dependable, always-working performance. In fact, the patented Levolier action is so positive that the No. 41 is unconditionally guaranteed*. Thousands of Model 41's, in use for years, prove this true. The small, compact size makes it ideal for use in modern lighting fixtures, as well as for FHP motors.

A new Levolier Model 71—This 6 amp 125 volt, "T" rated switch has a molded plastic case less than ½" thick. Pressure connected six inch wire leads provide fast, easy installation.

Available From Your Electrical Wholesaler

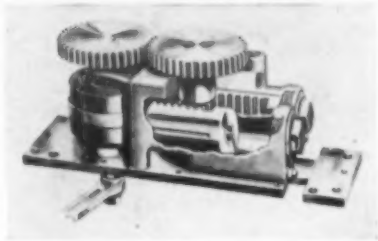
For McGill Catalog No. 49 write to McGill Mfg. Co., Inc., 151 N. Campbell St., Valparaiso, Indiana.

McGILL® electrical specialties

ONLY McGILL MAKES Levolier SWITCHES

For more details circle **NED-4003** on enclosed inquiry slip

CONCEALED DOOR CLOSER usable on left or right hand doors



Double piston principle utilized in completely concealed hydraulic door closer provides back check feature and permits apparatus to be changed on job for left or right hand doors. It employs one shaft that runs through center of coil to which is attached ratchet and gear that moves in two oil-impregnated self-lubricating bronze bearings. Power is supplied directly through gearing to eliminate lost motion and give constant control of door from 180-degree opening to latching position. Interchangeable standard coils and synthetic rubber packing are used. Made by **Norton Door Closer Co.,** Dept. NED, 2900 N. Western Ave., Chicago 18, Ill.

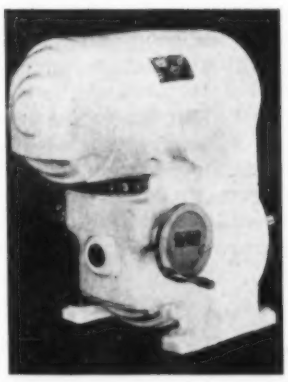
For more details circle **NED-4004** on enclosed inquiry slip

WELD CYLINDER TRUCK is balanced for easy handling

Wheels of this welding-gas cylinder truck are inside frame, and platform is 5 in. from ground when moving. Platform sets flat on floor for ease of loading and to relieve tires of all weight. Truck is of all-welded construction and employs ball-bearing wheels and semi-pneumatic tires. Chain holds cylinders securely at all times. Tool box is furnished with all models. Truck is available in 20½ and 24-in. widths. Made by **Randall Mfg. Co.,** Dept. RAN-3, North Kansas City 16, Mo.

For more details circle **NED-4005** on enclosed inquiry slip

VARIABLE SPEED MOTOR permits pump speed to be sealed



Available with provision for sealing speeds at positive setting or within any predetermined range of speeds, Speed-Trol variable speed electric motor is recommended for driving pumps for high temperature pasteurizing where pump speed can be sealed in accordance with sanitary regulations. Other applications include use on agitators, mixers, blenders, grinders and feeders. Mounting dimensions are interchangeable with those of NEMA standard motors; and unit can be furnished totally enclosed, splashproof or dripproof. Made by **Sterling Electric Motors, Inc.,** Dept. NED, Telegraph Rd. at Atlantic Blvd., Los Angeles 22, Calif.

For more details circle **NED-4006** on enclosed inquiry slip

Courtesy Ideal Models Co., Detroit, Mich.

for Model Kitchens!

Six versatile De-Sta-Co Toggle Clamps save in this simple, economical, plastics cementing fixture. The turntable more than doubles production . . . eliminates the cementing cycle "bottleneck."

These perfect reproductions are for a manufacturer of metal kitchens. This operation, cementing on tops, requires: Fast cementing cycle—positive clamping pressure for a perfect bond—precise alignment for accurate assembly.

De-Sta-Co No. 225-U fills these requirements. *Completely retractable* when opened for quick insertion and removal of work, it offers the rapid toggle action, positive holding pressure and accurate performance that make De-Sta-Co Toggle Clamps *ideal* "Model Tooling".

For *your* working-holding problems in Assembly, Welding, Bonding, Machining, Inspection . . . of any materials . . . tool up with these economical, efficient, high-production examples of "Model Tooling".

De-Sta-Co Toggle Clamp Catalog describes more than forty stationary and portable clamps. Write for your free copy today.

DETROIT STAMPING CO.

360 Midland Ave. • • Detroit 3, Mich.

For more details circle **NED-4007** on enclosed inquiry slip

REMOVE SCALE, SLUDGE, RUST

and other accumulation . . . with AURAND CLEANING TOOLS

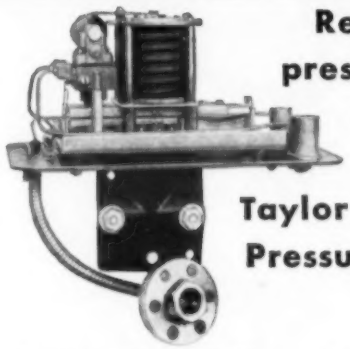
FOR ANY HARD SURFACE: IRON—STEEL—BRICK—CONCRETE—ETC.

It's easy to remove paint, scale, rust and other accumulations with AURAND Cleaning Tools. Powered, rotary chipping does a thorough cleaning job in less time. No special skill required. Even depth surface is assured by an adjustable shoe control. Cutter heads are renewable.

For further information write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle **NED-4008** on enclosed inquiry slip



Read changing pressures instantly 1000 ft. away with new Taylor "TRANSAIRE*" Pressure Transmitter

*Trade-Mark

New Taylor TRANSAIRE Pressure Transmitter with narrow range spans lets you measure and transmit minute pressure changes up to 1000 feet with instant accuracy! Works on simple force-balance principle. Gives you accuracy of ½% of range span (**conventional devices are only accurate up to ½% of upper range limit**). Here's accuracy and sensitivity never before possible in pressure measurement—plus the convenience of suppressed ranges at high pressure levels.

7 IMPORTANT ADVANTAGES:

1. Range spans of 20 to 40 psi available throughout range limits of 35 to 415 psia.

2. Volumetric type pressure system is extremely accurate, practically clog-proof, has corrosion-resistant 316 stainless steel diaphragm.

3. Temperature and barometric compensation for higher accuracy.

4. Perfect for many jobs, especially thin fractionating columns.

5. No individual calibration of receivers or controller—thanks to standardized 3 to 15 psi output air pressure.

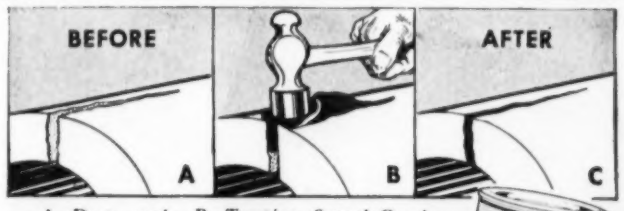
6. Simple screwdriver adjustment for shifting the operating ranges.

7. Interchangeable manifold assemblies make 20 and 40 psi range spans optional.

This Taylor TRANSAIRE Pressure Transmitter is another step in Taylor's program to produce industrial instrumentation unsurpassed in **accuracy, simplicity, and durability.** We're doing this, of course, to help you keep costs down and quality up. Ask your Taylor Field Engineer! Or write for BULLETIN 98099. Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada. *Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.*

TAYLOR INSTRUMENTS MEAN "ACCURACY FIRST"

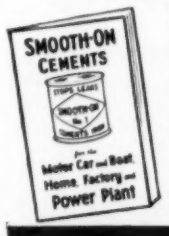
For more details circle **NED-4009** on enclosed inquiry slip



A—Deep crack. B—Tamping Smooth-On in. C—Crack completely sealed.

If You've Never Used SMOOTH-ON, *read this:*

Smooth-On No. 1 Iron Cement is a metallic powder which you mix with water to the consistency of putty. You tamp it, while still soft, into a crack or hole, making sure to force it against all surfaces. With Smooth-On you don't need to use heat or special gadgets. As it hardens, it expands slightly, clinging tightly in place. The repaired part is ready for use as soon as Smooth-On sets hard. Keep Smooth-On handy for both emergency and routine maintenance repairs. Buy it in 7 oz., 1 lb., 20 lb., or 100 lb. size. If your supply house hasn't Smooth-On No. 1, write us.



FREE 40-PAGE REPAIR HANDBOOK

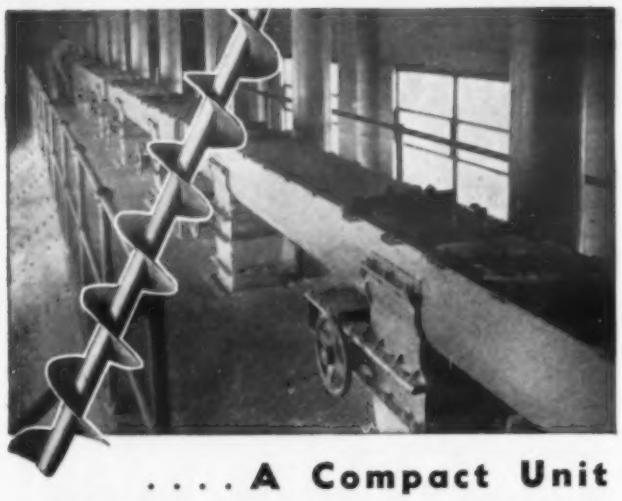
Shows many industrial and home repairs made with No. 1 and other Smooth-On Cements. Leaks stopped, cracks sealed, loose parts made tight. 170 illustrations. Drop us a line for YOUR free copy.

SMOOTH-ON MFG. CO., Dept. 10
570 Communipaw Ave., Jersey City 4, N. J.

SO-293

Do it with **SMOOTH-ON**
THE IRON CEMENT OF 1000 USES

For more details circle **NED-4010** on enclosed inquiry slip



. . . . A Compact Unit

JEFFREY SPIRAL CONVEYOR

Covered type shown handles dusty materials. No return strand. Capacities vary with size of conveyor. Six types—Sectional, Helicoid, Mixer, Cut Flight, Ribbon and Cast Iron. Uniform strength, perfect fit, true alignment. Catalog No. 803 describes many uses. Send for it.

JEFFREY

THE JEFFREY MANUFACTURING CO.
952 Fourth St., Columbus 16, Ohio

For more details circle **NED-4011** on enclosed inquiry slip

MORE THAN JUST A

New Catalog

on EYE and RESPIRATORY SAFETY EQUIPMENT

Send for it today!

Besides product information on Willson goggles, respirators, gas masks, welding helmets, etc., you'll find much worthwhile information such as

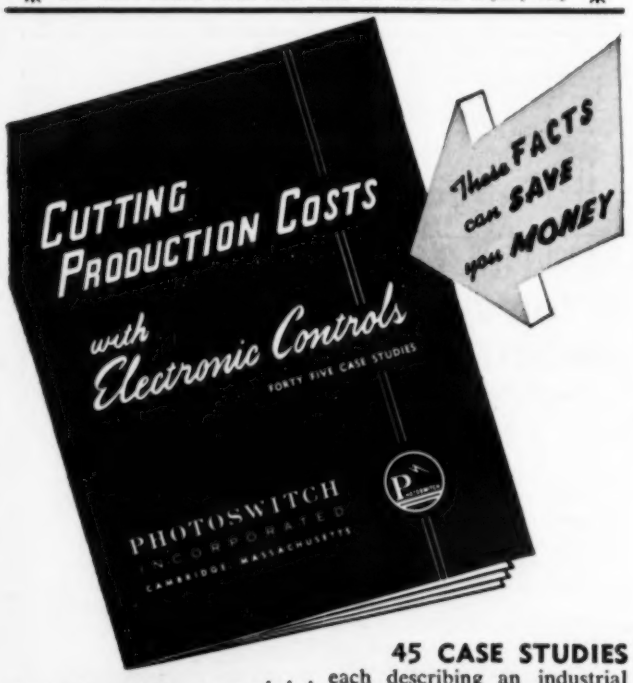
- Federal specifications for safety glass
- Plastics for eye protection
- Light transmission tables for filter glass
- Tables of respiratory hazards
- Gas mask selector tables

and other useful data that will help you select the proper safety equipment to meet specific hazards.

WILLSON
"Established 1870" *T.M. Reg. U.S. Pat. Off.

WILLSON PRODUCTS, INC., 219 WASHINGTON ST., READING, PA.

For more details circle **NED-4012** on enclosed inquiry slip



45 CASE STUDIES

. . . each describing an industrial control problem which has been solved through the use of electronics. Not a catalog . . . it shows HOW photoelectric and electronic controls count, guard, sort, weigh, measure, maintain liquid levels, program operating cycles and do countless other tasks with unfailing accuracy and amazing speed.

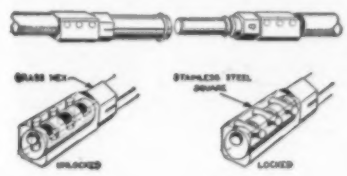
Write for your copy today.

PHOTOSWITCH INCORPORATED
77 Broadway, Cambridge 42, Massachusetts

For more details circle **NED-4013** on enclosed inquiry slip

SOLDERLESS CABLE CONNECTOR
is quickly detached and reconnected

Suitable for lifting magnet service and for other heavy-duty circuits supplying motors, welders and other equipment, Twist-N-Grip connector grips cable without solder to facilitate repairs in field. It consists of plug fitting into receptacle having snap-ring construction to provide secure connection. Pull of more than 50 lb is required to separate plug from receptacle.

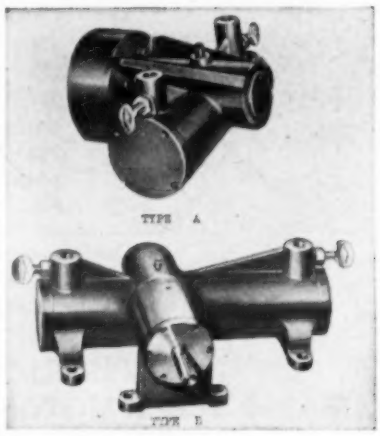


Synthetic rubber tube covers are available for insulating connector, and bushings of like material for each end of tube provide suitable step-down taper between connector cover and cable.

At lower left, connector is shown unlocked to receive skinned end of stranded or solid copper wire. Cable is locked by holding brass hex part with wrench to prevent rotation and turning stainless steel square slightly more than 90 degrees clockwise to grip wire firmly. Made by **Electric Controller & Mfg. Co.**, 2694 E. 79th St., Cleveland 4, O.

For more details circle **NED-4014** on enclosed inquiry slip

AIR MOTORS
high power factor in little space



Available in type A flush and type B base mounting models, Airlok motors convert compressed air through gearing to high torque reciprocating motion of driven shaft. Power can be transmitted from driven shaft through rack and pinion, cam, gears, sprockets and chain, sheaves or other methods, ratios of which afford wide range of movement of driven member.

Should air pressure drop or fail completely, Q-C lock which is incorporated will positively stop all movement in either direction regardless of load. When normal air supply is restored, normal operation automatically resumes. Through adjustment of two thumb screws, power factor and speed in either or both directions can be controlled for particular application. Made by Q-C Engineering Products Div., **Pearson, Inc.**, Dept. N., 2842 W. Grand Blvd., Detroit 2, Mich.

For more details circle **NED-4015** on enclosed inquiry slip

DO YOU KNOW? Paradichlorobenzene, a chemical heretofore used to control the clothes moth, is being employed successfully to prevent mildewing of stored wool, cotton, leather and paper products. Method developed by Monsanto Chemical Co., 1700 S. Second St., St. Louis 4, Mo.

For more details circle **NED-4016** on enclosed inquiry slip

modern design for modern sanitation

LP-20
Available in Black or White

OPEN FRONT AND BACK DESIGN . . . means quicker, easier cleaning. Cuts upkeep to a minimum. No germ-collecting crevices, always sanitary.

SELF-RAISING . . . Seat remains upright when not in use with bowl serving as urinal. Seat stays clean and dry.

SOLID PLASTIC . . . Shatter-proof, fire-proof. Plastic covered hinge is dirt free, moisture proof. Assures long life, low maintenance.

WRITE NOW for full details on Model LP-20 (illus.), Model LP-40 with self-sustaining hinge, and a complete line of conventional models. DEPT. NE

SPERZEL
123 14th Avenue South
Minneapolis, Minnesota

All Sperzel Seats Fit Standard Bowls

For more details circle **NED-4017** on enclosed inquiry slip

Engineered to *Your* needs

COWLES *Ultra-Fast* **DISSOLVER**

2 to 20 TIMES FASTER
Than Conventional Mixers

Saving up to 46½ hours per cycle—at rates 2 to 20 times faster than conventional mixers—the Cowles Ultra-Fast Dissolver is an engineered product, not a standardized machine. It can be adapted to meet a wide variety of conditions. In fact, all Cowles Dissolvers are more or less *engineered to the job* in that speed, horsepower, impeller and chemical inertness of tank are adjusted to the gallonage, viscosity, physical and chemical properties of the materials you have to process. Standard dissolvers employing the Cowles Method are available in 4 different types.

LET US DEMONSTRATE. In every case on record—either dissolving or dispersing—the Cowles Dissolver has consistently outperformed conventional mixers, cutting operating cycles to a minimum that is difficult to believe. Yet the result is achieved with a simple mechanism that applies classical physical laws. Incredulous? Don't be. Let us demonstrate on *your* materials. No cost. No obligation. Simply write or wire.

The Cowles Company
INCORPORATED
126 TRACKSIDE, CAYUGA, N. Y.
Associate: Alexander Fleck, Ltd., Ottawa, Ont.

For more details circle **NED-4018** on enclosed inquiry slip

The New METZGAR "Pelican" FLOOR LOCK

USED WITH PORTABLE BASE STAND

"Pelican" locks the entire end of the unit—not just one caster or corner—and holds it.

Hand lever and cam holds bar 1" off the floor for moving.

No wobble—no side sway.

On Metzgar Portable base stands or separate for welding to your equipment.

GET METZGAR'S PRICE BEFORE YOU BUY

COMPLETE LINE OF ACCESSORIES
Switches—Curves—Portable and Permanent Curve, Line Base and Section Stands — Brakes — Stops — Transfer Tables — Turntop and Roller Top Stands—Wheel & Roller Gravity & Power Conveyors.

METZGAR

METZGAR CO.
416 Douglas St., N. W.
GRAND RAPIDS 4, MICH.

For more details circle **NED-4019** on enclosed inquiry slip

Convenience, Speed and Low Operating Cost, *Spell Profit*

Any job you can do on the SHELDON Size "O" Milling Machine is a high profit job because this small, fast machine costs so little to own and operate. And, much of the milling work in most shops is well within the capacity of this easy handling money maker.

Keep your big milling machines for big work, but be sure to have one or more of these smaller faster tools for extra profit on your ordinary tool room jobs.

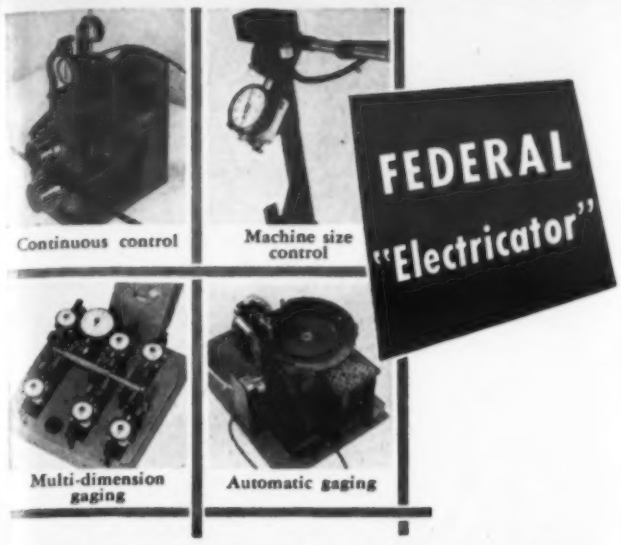
SHELDON
Milling Machine

Write for complete Catalog which includes specifications and attachments.

4215 N. KNOX AVENUE • CHICAGO 41, ILLINOIS, U. S. A.

SHELDON MACHINE CO. Inc.
Manufacturers of Sheldon Precision Lathes • Milling Machines • Shapers

For more details circle **NED-4020** on enclosed inquiry slip



Federal "Electricator" combines the Dial Indicator with an electrical power circuit. You can use it for high-speed gaging — for machine control — for automatic gaging — for process control. "Electricator" fits into same space as a Dial Indicator. It helps you to get faster inspection, better inspection, and greater output from grinders and processing equipment. Write for more information. Federal Products Corp., 1176 Eddy St., Prov. 1, R. I.

FEDERAL
Largest manufacturer of indicating type gages . . . exclusively.

For more details circle **NED-4021** on enclosed inquiry slip

PAGE FENCE - Since 1883

• AMERICA'S FIRST WIRE FENCE •

There's one "Best" for You

● Your question is how to know which fence best meets your needs for protection against common hazards. You'll get the answer if you ask us for booklet **DH-142.** Page offers a wide variety of Chain Link Fence and Gate styles and a choice of metals to give you the fence that is exactly right for you. And more—your good-looking, long-lasting fence will be expertly erected by the nearby Page Fence specialist. His is a local, responsible, experienced firm having a continuing interest in every fence it erects. We will send his name and address with your DH-142.

***Write** to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, Pittsburgh, New York or San Francisco.*

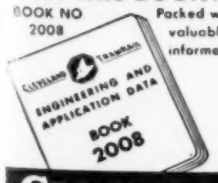
PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

For more details circle **NED-4022** on enclosed inquiry slip

20 FOOT BARS
Stored and Handled Efficiently

Simple, inexpensive overhead tramrail cranes make it easy to handle long, unwieldy bars and store them in racks where readily found. One man can easily and quickly place a heavy bar into or take out of storage and deliver to any point covered by the crane.

GET THIS BOOK!
BOOK NO 2008
Packed with valuable information



Wherever materials are moved Cleveland Tramrail offers possibilities of tremendous savings.

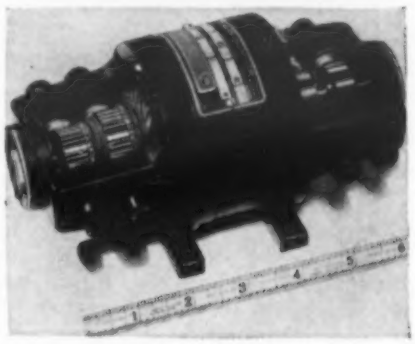
•

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6621 East 285th St., Wickliffe, Ohio

CLEVELAND TRAMRAIL

For more details circle **NED-4023** on enclosed inquiry slip

MULTIPLE POWER SUPPLY
utilizes permanent magnet fields



Designed for applications requiring multiple input or output, Multi-Magmotor is recommended for furnishing rotary power for geophysical instruments, aircraft and mobile communication systems. Frame features permanent magnet design which minimizes overall size and weight. Because field flux remains constant regardless of input voltage, single, dual or triple input voltages are possible. One, two or three direct current output voltages are also available. Made by **Carter Motor Co.,** 2660 N. Maplewood Ave., Chicago 47, Ill.

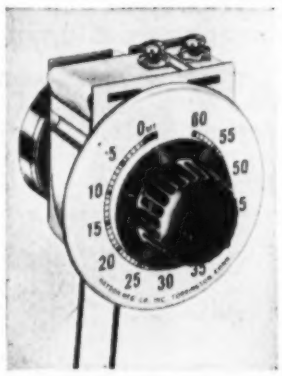
For more details circle **NED-4024** on enclosed inquiry slip

MILD STEEL ELECTRODE
has broad operating current range

Operating best and without overheating at currents above those normally used with E6012 type, Fleetweld 72 mild steel electrode is adapted to high speed production of single pass fillet and lap welds in flat or horizontal positions. With higher melt-off rates, greater welding speeds are obtained in depositing dense high-strength ductile welds. Arc characteristics secure excellent root penetration, and nearly-flat bead eliminates piling up of excess weld metal. Electrode is available in 14 and 18-in. lengths and in diameters from 1/8 to 5/16-in. for operation on both alternating and direct current. Made by **Lincoln Electric Co.,** Dept. AP-574, Cleveland 1, O.

For more details circle **NED-4025** on enclosed inquiry slip

INTERVAL TIMER
for 1, 15, 60 and 180 minutes



Underwriters' Laboratories approved for operation at 28 amp 250 v ac, improved series 8006 interval timer can be obtained in standard models with dial and knob for intervals listed or from 5 minutes to 60 days on special order. Unit is provided with heavy contact pressure and ample follow-through and has snap-action device for quick positive break. Because of controlled lubricating system in motor, timer can be mounted and operated in any position. Various special models can be obtained with two switches for volume applications where separate circuits are required. As with former models, hold feature is available for battery charger use to provide constantly energized motor for instant starting. Made by **Haydon Mfg. Co.,** 9247 Elm St., Torrington, Conn.

For more details circle **NED-4026** on enclosed inquiry slip

SHENANGO-PENN *Centrifugal* CASTINGS ... KEY TO SAVINGS

These large cast iron mandrels, with bronze end bushings, all cast centrifugally and finish machined by Shenango-Penn, are used to form composition pipe . . . must stand high pressures and stresses.

For high pressures, high stresses...

IF you need rolls, or *any* symmetrical or annular parts requiring unusual strength, uniformity, wear resistance or freedom from porosity and defects, check with Shenango-Penn. These very qualities are inherent in the carefully controlled Shenango-Penn *centrifugal* casting process. You stand to save time and money . . . to avoid needless trouble.

For free descriptive bulletins, for specific data on ferrous or non-ferrous work, large or small, semi or finish machined, write to . . .

SHENANGO-PENN MOLD COMPANY
886 W. Third Street Dover, Ohio
Executive Offices: Pittsburgh, Pa.

SHENANGO PENN

ALL RED BRONZES • MANGANESE BRONZES • ALUMINUM BRONZES
MONEL METAL • NI-RESIST • MEEHANITE METAL

For more details circle **NED-4027** on enclosed inquiry slip

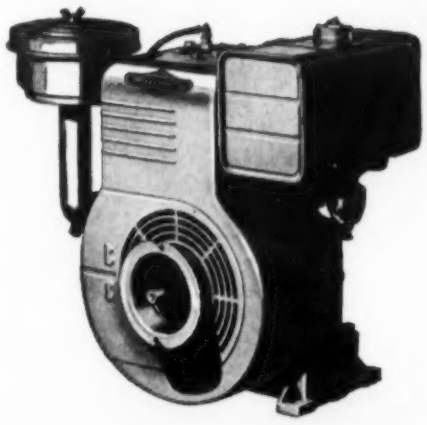
THIS **3-1/4" DIA.** CIRCLE SHOWS **ACTUAL SIZE** OF THE CROSS-SECTION OF ORTMAN-MILLER'S **CYLINDER** WITH **3" BORE**

Bore for bore, save 1/3rd in space. All machined steel with bronze bearing surfaces. Simplified design adaptable to any application. Bores to 8" immediately available. Write for details today!

ORTMAN-MILLER
MACHINE CO., INC.
1222-4 150th Street, Hammond, Indiana

For more details circle **NED-4028** on enclosed inquiry slip

Compact... and TOUGH



Designed *right* – then *built right* – for the toughest kind of service, year after year – Briggs & Stratton 4-cycle, single-cylinder, air-cooled gasoline engines are produced by an organization with over 30 years of engineering and manufacturing experience gained during the building of more than 4½ million air-cooled engines.

BRIGGS & STRATTON CORP.
Milwaukee 1, Wisconsin, U. S. A.

4 CYCLE **BRIGGS & STRATTON** GASOLINE ENGINES

World Wide FACTORY SUPERVISED SERVICE

Powered Power FOR INDUSTRIAL CONSTRUCTION RAILROAD AND FARM EQUIPMENT

For more details circle **NED-4029** on enclosed inquiry slip

The World's Most Efficient
CONCRETE DRILL

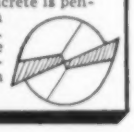
THE TILDEN ROTARY KONKRETE KORE DRILL

gives lowest cost per foot of concrete drilled because it:

- Drills at 2 to 6 inches per minute
- Drills reinforcing bars and beams in concrete
- Drills up to 30 feet of concrete without resharpening
- Gives straight, clean holes for anchors, conduit, etc.
- Uses ordinary electric drill

Quiet cutting action gives minimum disturbance of surrounding activities.

New, exclusive "centerless" design of drills from ¼" through 7/16" diameters is 3 to 4 times more efficient than ordinary pointed drills. Concrete is penetrated faster with 80% less pressure. Prices on these drills have been reduced by as much as 50%.



Tilden drill bits are available in standard sizes of from ¼" to 4" diameters. Quotations on larger sizes on request.

Write today for catalog with complete details on these revolutionary concrete drill bits.

TILDEN TOOL MANUFACTURING COMPANY
1995 NO. FAIR OAKS, PASADENA 3, CALIFORNIA

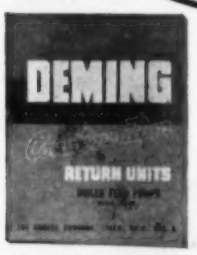
For more details circle NED-4031 on enclosed inquiry slip

Name Your Need in
CONDENSATION RETURN UNITS and Boiler Feed Pumps

You can select from this exceptionally complete line the pumping unit best suited for each specific requirement. Various types of standard Deming Pumps are used with these units in a wide range of capacities. Operation of all units is automatic and dependable.

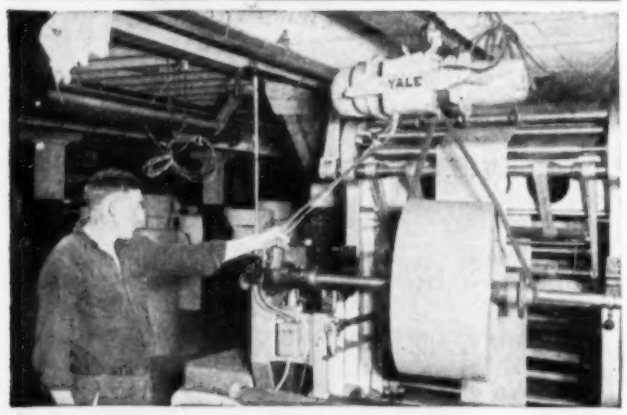
THE DEMING CO.
520 BROADWAY
SALEM, OHIO

Deming Pumps



Write for 24-page illustrated catalog "BULLETIN NO. CR-1"

For more details circle NED-4032 on enclosed inquiry slip



AIR-COOLED YALE CABLE KING WIRE ROPE ELECTRIC HOIST DOESN'T OVERHEAT

- Exclusive air-cooling and positive load brake lubrication make this hoist ideal for continuous heavy-duty service.
- Lifting speeds range up to 72 F. P. M. on some models.
- Push-button control leaves one hand free to guide the load—makes "inching" easy.
- Wire rope, with hemp-lubricated center for long life, has flexibility for side lifting.
- Wide range of models in capacities from ¼ to 12 tons. Winches up to 3 tons. Write for literature.

YALE — THE YALE & TOWNE MANUFACTURING CO.
Roosevelt Boulevard • Philadelphia 15, Pa.
HAND LIFT AND POWER TRUCKS • HAND AND ELECTRIC HOISTS • INDUSTRIAL DIAL SCALES

For more details circle NED-4033 on enclosed inquiry slip

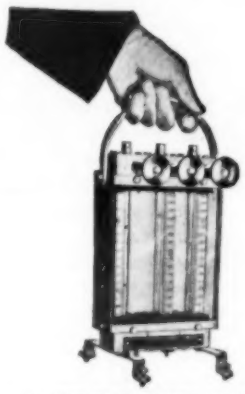
MAGNETIC CLUTCH
capacity is 0.20-hp on 3-w dc input

Designed for servos and other mechanisms where rapid engagement and release is required, this magnetic clutch delivers maximum torque of 4 lb-in. at speeds up to 3600 rpm. When electromagnet is energized, cork-faced driven disk is clamped between two driving members. For high torque transmission, driven disk is faced on both sides. Splined bore in driven disk permits easy coupling to load. Nonrotating electromagnet with flange mounting obviates need for slip rings and auxiliary bearings. Driving plates are ventilated for rapid cooling. Made by **Barber-Colman Co.**, 230 Loomis St., Rockford, Ill.

For more details circle NED-4034 on enclosed inquiry slip

PORTABLE METERING KIT
has three integral metering tubes

Flow range of this portable Triple Meter metering kit is 0.1-cu cm per minute to 0.5-gpm of liquid and 5 cu cm per minute to 2 cfm of air. It is suitable for research, pilot plant and field work and can be equipped with brass or type 316 stainless steel built-in needle control valves. Unit can be supplied in end fittings of steel, brass, aluminum, 303 and 316 stainless steel, hard rubber, nickel, Monel, Durimet and Hastelloy C. Weight of unit including self-supporting legs and carrying handle is 15 lb. Made by **Brooks Rotameter Co.**, P. O. Box B-59550, Lansdale, Pa.

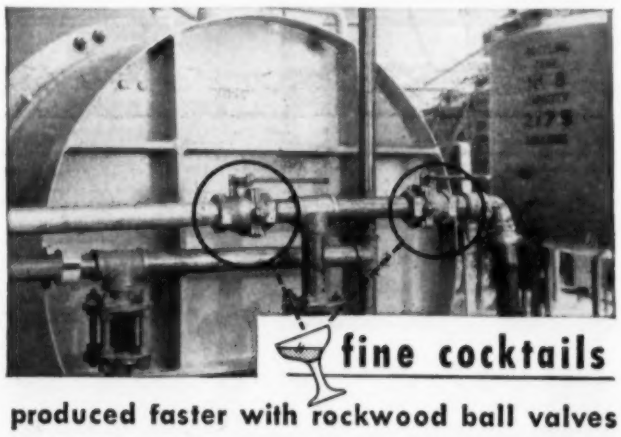


For more details circle NED-4035 on enclosed inquiry slip

SUBMINIATURE PENTODE
has 7.5-ma low microphonic filament

Suitable for use in portable radioactivity meters, type CK5889 subminiature electrometer pentode features double-ended construction, permanently bonded metallic guard ring and extremely low grid current. In single-stage circuit where tube must actuate indicating or recording device, it has sufficient reserve emission to provide operation for several thousand hours. In multi-stage circuits where tube is operated at low space currents in high-gain pentode connection, filament power can be reduced to 5 milliwatts with stable long-life operation. Electrical characteristics include high transconductance, good emission stability, low drift and low microphonics. Made by **Raytheon Mfg. Co.**, Special Tube Section, 55 Chapel St., Newton 58, Mass.

For more details circle NED-4036 on enclosed inquiry slip



fine cocktails
produced faster with rockwood ball valves

Until G. F. Heublein & Bro., Inc. of Hartford, Conn. switched to Rockwood Ball Valves for use on their Club Cocktails filter machine, it was necessary for them to replace their old valves every six or seven months. During that period the maintenance cost for keeping these valves in working condition ran high.

The two 1½" Rockwood Ball Valves shown above are opened and closed approximately 50 times a day and have been in operation for over nine months without any maintenance. Foreman of this cocktail department says, "The Rockwood Ball Valves operate easier and do not bind or stick when opened or closed. Because of the trouble-free service we have been getting from the Rockwood Ball Valves, we have greatly increased our Club Cocktails production."

Rockwood Ball Valves are giving outstanding service in chemical, food, paper, textile and other process plants, oil refineries, etc.

Made in bronze with screwed ends in all pipe sizes from ½" to 2" for 300 p.s.i. working pressure.

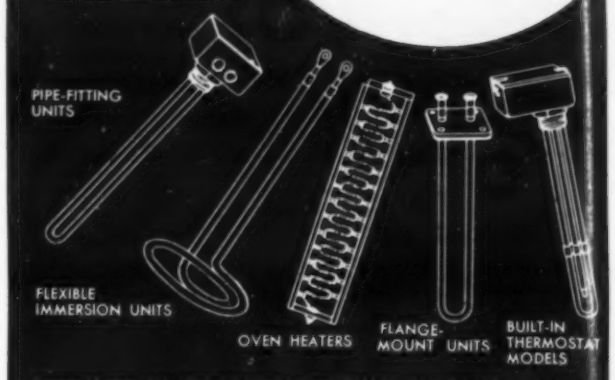
Distributors in all principal cities.

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

For more details circle NED-4037 on enclosed inquiry slip

THERMALINK Electric HEATING ELEMENTS
OVER 600 STANDARD MODELS & TYPES

IMPROVE YOUR ELECTRICALLY HEATED PRODUCTS AND EQUIPMENT WITH THERMALINK ELEMENTS

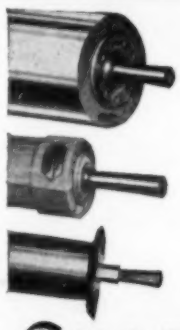


SPECIALISTS IN CORROSION-RESISTANT IMMERSION HEATERS

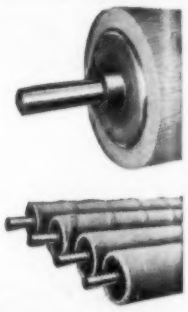
Write Dept. N for Literature

ELECTRO-THERM INC.
8024 GEORGIA AVE., SILVER SPRING, MD.

For more details circle NED-4038 on enclosed inquiry slip

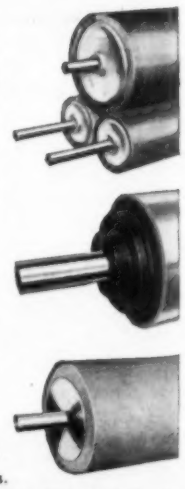


MANY INDUSTRIAL ROLL PROBLEMS are solved by using



SHAF-TITE* ROLLS

Many patented constructions provide strongest possible shaft setting. Your choice of many different types and materials—wood, rubber, iron, brass, stainless steel plastic, etc. Whatever your roll problem, put it up to Rodney Hunt.



SEND FOR NEW CATALOG NO. 48
Most complete publication of its kind

Industrial Roll Division
RODNEY HUNT MACHINE CO.
73 Maple Street, Orange, Mass.

*Reg. U.S. Pat. Off.

For more details circle NED-4039 on enclosed inquiry slip

THE MATEER ELECTRIC FILLER HANDLES THEM ALL!

LIQUIDS • OILS • POWDERS • PASTES
COMBINED LIQUIDS AND SOLIDS
1/500 oz. to 2 Pounds
20 to 70 Per Minute
Up to 750° F

SAVE TIME AND MONEY WITH THE MATEER ALL ELECTRIC FILLING HEAD

Totally enclosed, manual or automatic. Accuracy as close as ±½%. Synchronize this self contained filling head with existing production lines and processing systems.

Jacketed and electrically heated hoppers available for handling cold and hot materials up to 750° F.

Hot waxes, insulating compounds and asphalts handled without difficulty.

Send full information and samples of material to be tested. Write Dept. 105 for fully illustrated bulletin.

G. DIEHL MATEER & CO.
Lincoln Highway • Devon, Pa.

For more details circle NED-4040 on enclosed inquiry slip

For more details circle **NED-4041** on enclosed inquiry slip

PORTER-CABLE ABRASIVE BELT MACHINING

Does More Surfacing Jobs *Faster* and *Better*

Features high speed cutting by millions of abrasive points imbedded in a continuous belt, cooled and cleaned by water and other coolants. Does close tolerance work on flats, squaring, cylindrical surfacing; deburrs, knocks off corners, forms radii, bevels and other operations. Often does milling, shaping, grinding operations 10 times faster—saves 75-90% setup time.

AUTOMATIC FEED

Already Saved Over Four Times the Cost of the Original Machine

A manufacturer of aluminum switches and conduit boxes achieved an amazing step-up when he replaced milling with a Porter-Cable BG-8, Automatic Feed. Before, he produced 25 boxes an hour — he now produces 100 an hour. He has already saved over four times the cost of the original machine. Details upon request.

CONTOUR GRINDING

Model C-6. For curved or flat-face grinding or polishing. Flexible abrasive belt runs over shaped contact roll. Loaded abrasive wheel no longer necessary. Wide-range adjustments easy for varied work. Saves set-up time and reworking of piece.

FINAL FINISH

Model WG-4. For production runs on small parts, fed freehand or by simplest fixtures. Gives final finish to jobs done on automatics, hand and hacksaws, lathes, milling machines, etc. Grinds carbide tipped tools.

PLATEN OR FREE BELT

Model B-6W. Quickly adaptable to flat, curved or irregular pieces. Various shaped platens form the flexible abrasive belt to fit many shapes of work. Free belt reaches inaccessible spots.

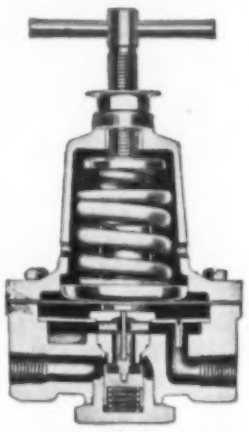
FREE — Let us prove that Abrasive Belt Machining (wet or dry) can reduce cost of many operations. Send us samples for recommendations — or ask to have our engineers discuss your problems at your convenience, at your plant.

PORTER-CABLE Machine Co.
2706 N. SALINA ST., SYRACUSE 8, N. Y.
Manufacturers of SPEEDMATIC and GUILD Electric Tools
In Canada Write: Strongridge, Ltd., St. Catharines, Ont.

For more details circle **NED-4042** on enclosed inquiry slip

LIQUID PRESSURE REGULATOR reduces pressures of up to 400 psi

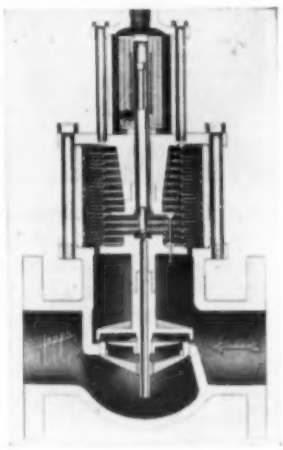
Water, oil and noncorrosive liquids up to 200° F in temperature can be held up to 250 psi by series 2H Norgren liquid pressure regulator in six ranges. Because of baffle plate and siphon tube action, regulator responds quickly to sudden demands for greater volume without excessive momentary pressure drop. Diaphragm is of water and oil resistant synthetic rubber reinforced with nylon cloth, and dashpot chamber parts are designed for resistance to wear and corrosion. Ranging in size from 6 to 9⅛ in. overall height, regulators are compact and easily installed. They can be dismantled for maintenance without removal from line. Made by **C. A. Norgren Co.**, 222 Santa Fe Dr., Denver 9, Colo.



For more details circle **NED-4043** on enclosed inquiry slip

SOLENOID VALVE offered in sizes from ½ to 6 in.

Designed especially to handle natural gas, oil and liquefied petroleum gas, this solenoid valve will operate on pressures from 10 to 200 psi. It can be furnished with screwed or flanged ends. Flexibility of bellows allows disk to seat completely, and there is no danger of its sticking open or closed because of foreign particles in line. Available with manual control, valve has explosionproof solenoids and can be exposed to all outdoor conditions. Bellows have life of at least 10,000,000 cycles. Made by **Hoppe Engineering Co.**, Corner Wood & High Sts., Greensboro, Ind.



For more details circle **NED-4044** on enclosed inquiry slip

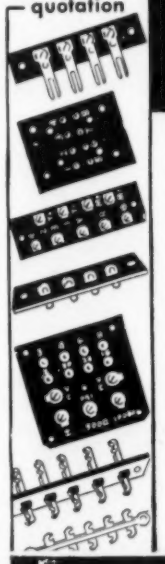
POCKET TELESCOPE affords six-power magnification

Measuring 5-in. long and weighing 2 oz, Penscope pocket telescope offers six-power magnification and 315-ft field of view at 1000 yd. It has six coated lenses that give full correction for spherical and color aberration. Fingertip-focusing unit has satin-chrome finish and clips easily into pocket. Industrial uses include checking meters, gages, car numbers and stockpiles from office or plant. Made by **Pan-technics, Ltd.**, Dept. 101, Encinitas, Calif.

For more details circle **NED-4045** on enclosed inquiry slip

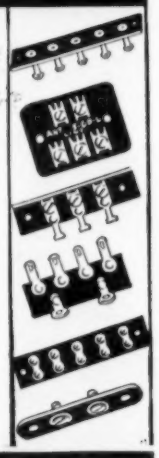
Send your specifications for prompt quotation

Hundreds of standard
JONES TERMINAL PANELS
Complete Equipment FOR SPECIALS



Several pages of Jones Catalog No. 16 illustrate standard and special panels we are constantly producing. Latest special equipment enables us promptly to produce practically any panel required. Send print or description for prices, without obligation. Hundreds of standard terminal strips also listed. Send for Catalog, with engineering drawings and data.

JONES MEANS Proven QUALITY



Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

For more details circle **NED-4046** on enclosed inquiry slip

HARDEST IN THE WORLD DEFIES WEAR

SELF PERPETUATING FERROUS HARDENED NATURAL EMERY STONE CONCRETE

Here is something entirely new which is revolutionizing the design and maintenance of concrete traffic surfaces.

Send for free descriptive literature today.

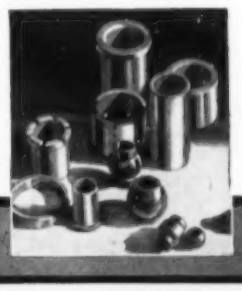
FLASH-STONE COMPANY, INC.
3723 Pulaski Ave., Philadelphia 40, Pa.

For more details circle **NED-4047** on enclosed inquiry slip

Can You Use SELF-LUBRICATING JOHNSON LEDALOYL BEARINGS?

IF SO, YOU WILL SAVE MONEY

NEW USES for these porous, oil-impregnated bearings are being discovered every month. You may need them for applications difficult to lubricate. They may even be sealed in place. Made by powder metallurgy, they are very low in cost. Johnson engineers will assist you in determining whether Ledaloyl Bearings can be used to advantage. Write today.



Johnson Bronze
SLEEVE BEARING HEADQUARTERS
580 SOUTH MILL STREET • NEW CASTLE, PA.

For more details circle **NED-4048** on enclosed inquiry slip

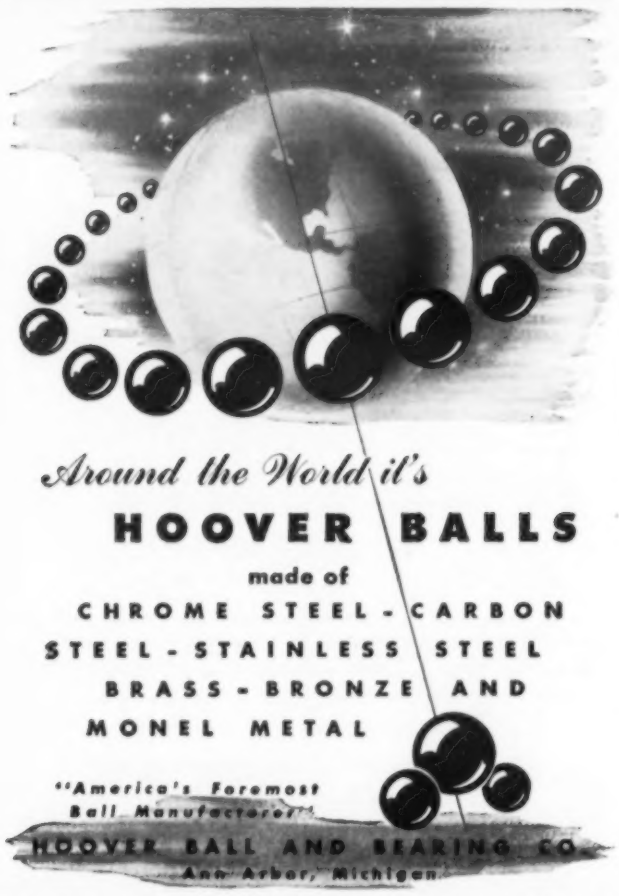
Alnor Velometer

Gives instant, direct reading of Air Velocity —Anywhere!

Here's a precision-built, self-contained, portable instrument that gives instant, *accurate* reading of air velocities—everywhere, in plants, mines, or mills. Measures speed of flow through ducts, grilles, motors, furnaces, or in the open. Needs no calculations or reference charts. Anyone can use it and get accurate measurements. Available in a wide range of scales, and with a wide assortment of jets and fittings if needed. You'll want full details and prices, so write for Bulletin No. 2448-G. Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Illinois.

Alnor
PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle **NED-4049** on enclosed inquiry slip



▲ For more details circle NED-4050 on enclosed inquiry slip ▲

NOW New Streamlined

RIDGID 65R

Die Stock that WON'T JAM

...while threading with power drive or by hand

New *JAM-PROOF* drive plate automatically kicks out driving ratchet pawl when standard length thread is cut. You don't have to watch it—lead screw can't jam on workholder.

Right Here is the simple automatic mechanism that makes 65R **Jam-Proof**

You can convert your present 65R to new JAM-PROOF type—buy new drive plate, put in place of old plate.

All other RIDGID 65R features remain the same

Perfect threads on 1" to 2" pipe with 1 set of high-speed steel dies—sets to pipe size in 10 seconds—mistake-proof self-centering workholder sets instantly—and now it's *Jam-proof.*

Buy new JAM-PROOF 65R at your Supply House

RIDGID

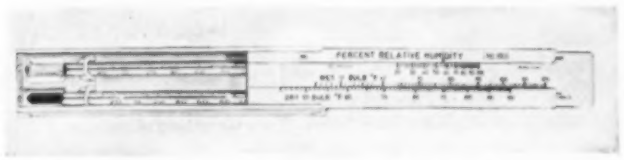
WORK-SAVER PIPE TOOLS

THE RIDGE TOOL CO. • ELYRIA, OHIO

▲ For more details circle NED-4051 on enclosed inquiry slip ▲

HUMIDITY INDICATOR
uses wet-and-dry bulb method

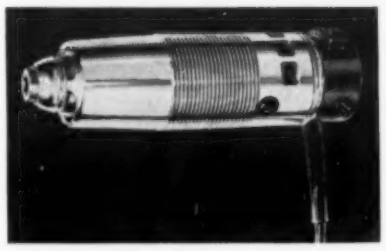
Wet-bulb and dry-bulb readings of TAG model 8704 Humidicator are converted directly into relative humidity by built-in slide rule. This pocket-size instrument can



be used manually or mounted on wall. It consists of two etched scale glass thermometers, individually calibrated for permanently accurate readings. These are secured in white plastic case by integral resilient mountings, and psychometric slide rule forms cover of this case. Made by **Weston Electrical Instrument Corp.,** 663 Frelinghuysen Ave., Newark 5, N. J.

▲ For more details circle NED-4052 on enclosed inquiry slip ▲

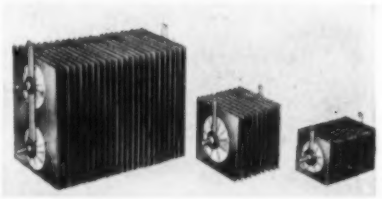
GRINDER-MILLER
free speed is above 45,000 rpm



Developing up to ¼-hp output at spindle, Precise Super 50 grinder-miller operates at speeds ranging from 15,000 to 45,000 rpm which are regulated by speed controls. Used with or without Coolflex flexible shaft attachment or in machine tool setups, it can drive mounted wheels up to 1¼-in. diameter, unmounted wheels, cutoff wheels and metal saws up to 2-in. diameter by ¼-in. width, and high speed steel and tungsten carbide Midget Mills up to ⅜-in. diameter and 1-in. width. Soft materials such as wood, rubber and plastics are worked as effectively as glass, Fiberglas and hardest metals. Motor is rated 115 v dc or ac. Made by **Precise Products Co.,** 1346 Clark St., Racine 11, Wis.

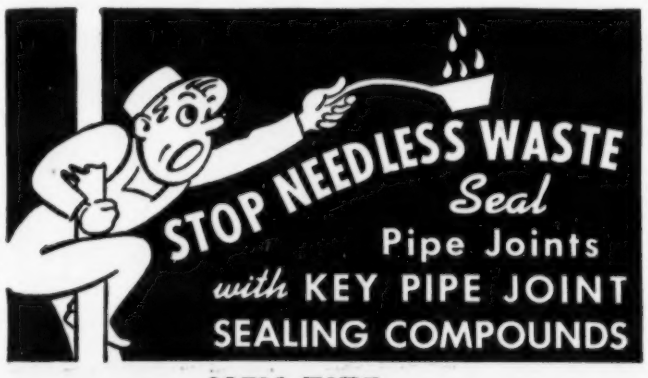
▲ For more details circle NED-4053 on enclosed inquiry slip ▲

SELENIUM RECTIFIERS
dry type in large plate sizes



Vacuum vaporization process is employed to produce these metallic selenium rectifiers of heavy-duty quality in large plate sizes. Selenium is deposited uniformly over entire plate area without flaw spots. Units have low resistance in conducting direction and can withstand high inverse voltage. Standard size plates measure from 1 x 1 in. to 6 x 12 in., and special large plates can be made to order up to 12 x 52-in. size. Two or more studs are used in stacking larger plates to provide stiffness and mechanical strength. Made by **Syntron Co.,** 405 Lexington Ave., Homer City, Pa.

▲ For more details circle NED-4054 on enclosed inquiry slip ▲



KEY-TITE Water, gas, low-pressure steam and compressed air lines are completely sealed when you use KEY-TITE. This lead-free compound does not affect taste or odor of potable liquids.

KEY GRAPHITE PASTE Oil, gasoline, kerosene and high-pressure steam lines require the perfect seal provided by KEY GRAPHITE PASTE. With KEY, pipe joints are sealed and lubricated at the same time.

Pipe joints and fittings sealed with Key Pipe Joint sealing compounds do not leak. Connections will not freeze and reopening is easy.

There is a Key compound to fit your pipe joint sealing requirements. Send for free sample.

KEY Company

KEY COMPANY
2601 McCasland Ave.
East St. Louis, Ill.

▲ For more details circle NED-4055 on enclosed inquiry slip ▲

Cut Distribution Costs with.. JEFFERSON

Dry Type POWER CIRCUIT Transformers

In new plants, present practice calls for distributing power at higher voltages—460 or 575 volts—and providing for the lower voltage circuits for lighting and operation of portable equipment by means of compact dry type transformers. Thousands of Jefferson Transformers have been installed for such purposes.

The cost of this distribution is reduced by savings in copper, conduit and fittings. Further economy is realized as all power is bought through one entry and one meter. For motor driven machinery where low voltages are required for control, relays, etc., Jefferson Power Circuit Transformers are often mounted on the machine itself.

Write today for Bulletin 501-15

JEFFERSON ELECTRIC CO.
Bellwood, Illinois

In Canada: Canadian Jefferson Electric Co., Ltd., 384 Pape Ave., Toronto, Ont.

▲ For more details circle NED-4056 on enclosed inquiry slip ▲

NO PUMP PACKING TROUBLES

Because There's No Packing!

For pumping acids, caustics, and other difficult liquids as well as water. Handles air or vapor **with the liquid.** Ten GPM and larger. Ask for Bulletin 53.

THE LaBOUR COMPANY, INC.
Elkhart, Indiana, U. S. A.

SELF PRIMING CENTRIFUGAL

LABOUR Type BGM

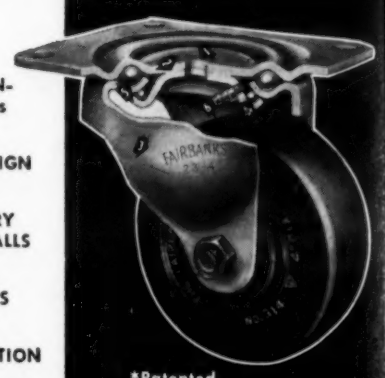
▲ For more details circle NED-4057 on enclosed inquiry slip ▲

NEW Fairbanks Series "23" Double Ball Race SWIVEL CASTER

STRONGER ON EVERY POINT

The NEW Fairbanks Series "23" Double Ball Race Swivel Caster* line is designed for greater load carrying capacity in the medium duty field.

1. NO KING-PIN it's eliminated!
2. "LOCK-WELD" CONSTRUCTION retains perfect alignment!
3. PATENTED LEG DESIGN resists distortion!
4. LARGER SECONDARY RACEWAY AND BALLS work easier!
5. COINED RACEWAYS improve with use!
6. PRESSURE LUBRICATION reduces friction!



*Patented

THE Fairbanks COMPANY
393 LAFAYETTE STREET, NEW YORK 3, N. Y.
BRANCHES: Boston 10 • Pittsburgh 22 • New York 3 • Rome, Ga.

TRUCKS • VALVES • DART & PIC UNIONS • CASTERS

▲ For more details circle NED-4058 on enclosed inquiry slip ▲

Increase Production of Fines by 300% with

Accurate Separation of Fines from 40 to 325 Mesh and Finer . . . Output Capacity from ¾ to 50 Tons Per Hour

Records prove that Sturtevant Air Separators cut separation costs of various materials by as much as 300%. In addition, they provide additional economies by reducing power costs up to 50%. That's why you'll find hundreds of these separators in all types of industries. Ruggedly constructed of quality materials, Sturtevant Air Separators keep on working day after day with minimum maintenance. They are available in many sizes from ¾ to 50 tons per hour output.

Investigate cost-cutting Sturtevant Air Separators for your plant. Write for catalog and information, today.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASS.

Designers and Manufacturers of

CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS
MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

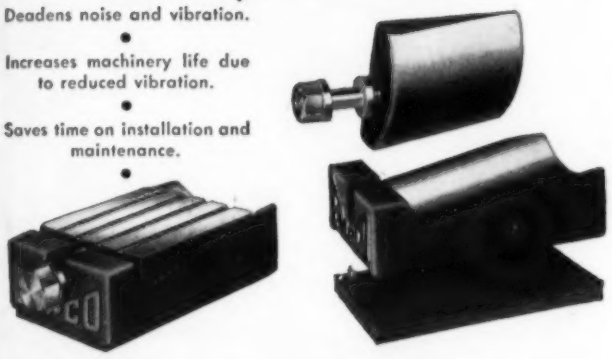
For more details circle **NED-4059** on enclosed inquiry slip

NEW

VIBRATION ABSORBING MACHINE LEVELING

Empco JACK

Deadens noise and vibration.
•
Increases machinery life due to reduced vibration.
•
Saves time on installation and maintenance.
•

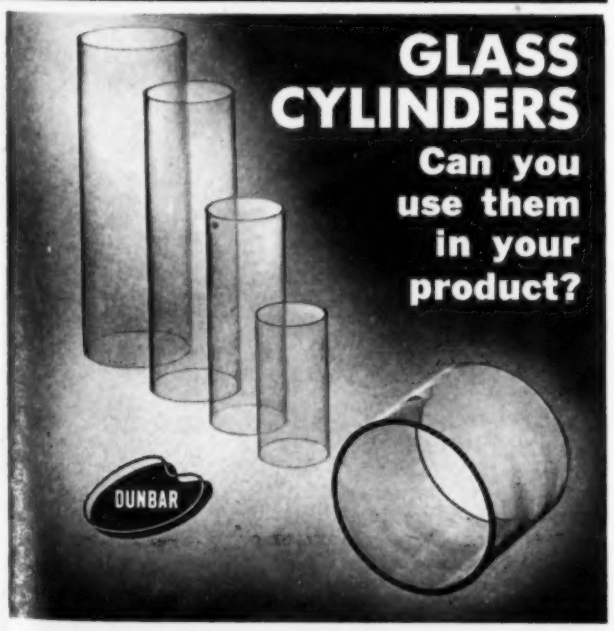


Tests have proven that "Controlled vibration means increased productivity and decreased maintenance costs." That is why the new Empco Jacks, featuring VI-SORB, the vibration absorbing mounting pads, save many times their initial cost. With the combined features of Empco's self-aligning, two-way control Jacks and VI-SORB pads, set-up and maintenance costs are greatly reduced. For complete data and prices on the new Empco Jack with VI-SORB pads, write or wire today. Immediate delivery.

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

For more details circle **NED-4060** on enclosed inquiry slip



For dispensers, merchandise displays, visible hoppers, lighting fixtures, sight feeders, meters, columns or any other applications, DUNBAR offers you a wide variety of cylinder sizes in economical quantities. Or we will fabricate blown glass cylinders to your specifications. We invite your inquiries. Write for our Glass Cylinder catalogue No. 66.

Dunbar Glass Corporation

DUNBAR, WEST VIRGINIA
NEW YORK CHICAGO CLEVELAND LOS ANGELES

For more details circle **NED-4061** on enclosed inquiry slip

HAND TACHOMETER
has speed range of 400 to 4800 rpm

Capable of indicating speeds directly without calculations when spindle with tip is applied to revolving shaft, model JP hand tachometer employs mechanical centrifugal movement with all operating parts on ball bearings. It is unaffected by magnetic or temperature conditions, fits neatly into palm of hand and weighs 19 oz. Scale reading is over 360 degrees of dial which has uniformly spaced divisions to assure easy and quick readings. Instrument is furnished in velvet-lined imitation leather case containing two tips, and 4-in. extension bar and 6-in. circumference wheel tip for feet per minute measurements can be obtained as extra equipment. **Herman H. Sticht Co.**, Dept. ED, 27 Park Place, New York 7, N. Y.

For more details circle **NED-4062** on enclosed inquiry slip

CONCRETE CUTTER
diamond wheel cuts to 3½-in. depth

Practically all ordinary concrete cutting requirements can be handled by Di-Met standard model which uses 12-in. diamond wheel on either right or left end of ball-bearing mounted spindle. Diamond wheel is lowered to proper cutting depth by means of manually operated worm and gear. Water can be supplied to blade by 15-gal tank or from mains or tank trucks through hose to independent water connection. Valves shut off tank supply when water is furnished through hose. Machine is powered by Wisconsin 7.5-hp air cooled gasoline engine which can be removed quickly and is equipped with tongue for attachment to any ordinary car trailer hitch. Quiet transportation at road speed is insured by 3.00 x 5 pneumatic tires. Made by **Felker Mfg. Co.**, 1125 Border Ave., Torrance, Calif.

For more details circle **NED-4063** on enclosed inquiry slip

DO YOU KNOW? Easy-Flo 45 silver alloy for brazing ferrous, nonferrous and dissimilar metals is now available in convenient package consisting of a 5-oz coil of $\frac{1}{16}$-in. wire and complete instructions for use. Distributed by Air Reduction Sales Co., Dept. NED, 60 E. 42nd St., New York 17, N. Y.

For more details circle **NED-4064** on enclosed inquiry slip

SHIPPING ROOM COSTS

BRING YOUR COSTS DOWN TOO!

An International Retractable Anvil Staple Machine—automatically staples filled cartons from the outside—tops and bottoms simultaneously. Closure meets requirements of Consolidated Freight Classification and Postal Regulations.

Customers report 50% savings on shipping room costs—virtual elimination of damage claims—cartons completely "tamper-proof".

One of our distributors will show you which of the thirty International models will fill your needs.

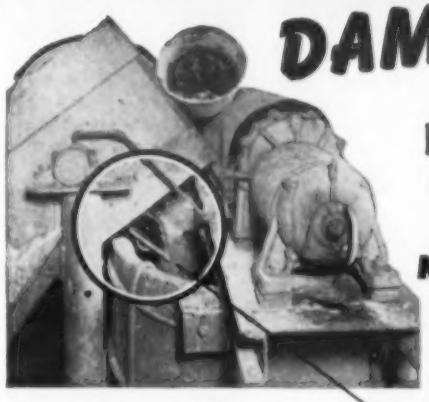
EST. 1938

INTERNATIONAL STAPLE & MACHINE CO.
HAVERTOWN, 2, PENNA.

DISTRIBUTORS IN PRINCIPAL CITIES

For more details circle **NED-4065** on enclosed inquiry slip

STOP TRAMP IRON DAMAGE with DINGS PERMA-PLATE MAGNETS



LEFT—This Dings PERMA-PLATE Magnet has paid for itself dozens of times by keeping bolts, nuts, etc., from ruining costly pulverizer.—National Lead Co., Perth Amboy, N. J.

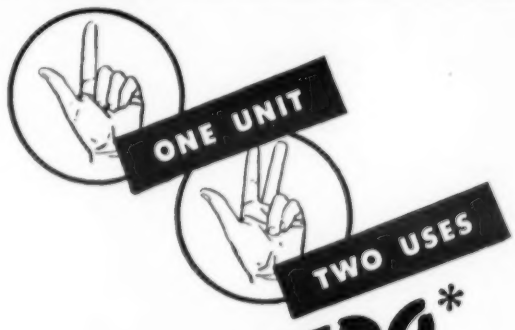
Low Cost . . . Powerful . . . Permanent . . . Highest Grade Alnico . . . No Maintenance . . . Lightweight

FOR low cost, *permanent* magnetic protection against costly tramp iron damage to vital machinery, install powerful Dings PERMA-PLATE Magnets in chutes, ducts, trays, spouts, over conveyor lines, etc. These high grade Alnico plate magnets are your best bet for maximum tramp iron removal. They work equally well with wet or dry materials, and are unaffected by atmospheric conditions in or out-of-doors. Dings PERMA-PLATE Magnets are simple to install, easy to clean and *their high magnetic strength is guaranteed for mechanical life of the installation!* Available in widths from 4" to 72" in 2" increments, special sizes on request. Write for Bulletin.

Dings "HIGH INTENSITY"

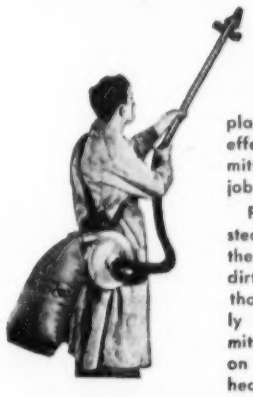
DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave.
MILWAUKEE 14, WIS.

For more details circle **NED-4066** on enclosed inquiry slip



*TORNADO**

Pac-Vac vacuum cleaner and **High-Velocity** portable blower



Cuts plant cleaning costs to a fraction of what you now spend because this compact, powerful, dual-purpose cleaning machine can be used in so many places where larger equipment is ineffective and time-consuming. Permits maintenance men to do a better job in less time.

PAC-VAC cleaner has such strong, steady suction that one stroke over the surface removes all dust, lint, dirt, abrasive grit and grime. Cleans thoroughly the first time over. Lightly carried over the shoulder, it permits flexible, maneuverable operation on bare and carpeted floors, overhead pipes and equipment, in congested plant and office areas and all hard-to-reach places. Saves cleaning time . . . does a better job.

HIGH-VELOCITY Blower shoots a powerful concentrated stream of clean dry air moving at 262 M.P.H. to blow abrasive dirt and grit from interior of motors and machinery, from gears, shafts, pulleys and similar equipment. Keeps machinery smooth-running at full operating power and helps eliminate friction and fire hazards due to dust accumulations. Reduces breakdowns and work stoppages. Absolutely safe for the most sensitive, intricate mechanisms.

Conversion from cleaner to blower accomplished in just 8 seconds. Simply detach bag, strap and hose from cleaner; attach nozzle at air outlet for blower.

Easily handled and directed. A favorite with maintenance men. Underwriter's Approved.

Bulletin 579 contains complete information. ASK FOR IT.

*Trade Mark Reg. U. S. Pat. Off.

BREUER ELECTRIC MFG. CO.
5098 Ravenswood Ave.
Chicago 40
Illinois

IN DUST RY

For more details circle **NED-4067** on enclosed inquiry slip

This Could Happen to You . . . . .

One of America's big small parts makers of unquestioned reputation has just been through an embarrassing predicament . . . delivering short count packages and worse still being told so by two large customers. Here is what happened (1) carelessness in checking filling machines (2) relying upon containers to take parts to required number (3) no systematic checkweighing of finished cartons. The situation was changed by installing EXACT WEIGHT Scales at filling machines so they could be adjusted, and other units to check by weight the count in finished cartons. Don't risk losses in parts and business in your plant. Write for details on best practices and equipment now available for your needs.

EXACT WEIGHT SCALES

Industrial Precision

THE EXACT WEIGHT SCALE COMPANY
129 W. Fifth Avenue, Columbus 8, Ohio
2920 Bloor St., W., Toronto 18, Canada

For more details circle NED-4070 on enclosed inquiry slip

To MEASURE

RESISTANCE • CAPACITANCE • INDUCTANCE

THIS completely self-contained, portable and accurate bridge is always set up to measure RESISTANCE from 1 milliohm to 1 megohm; CAPACITANCE from 1 micro-microfarad to 100 microfarads and INDUCTANCE from 1 microhenry to 100 henrys. It includes a 1000-cycle tone source for a-c measurements and a zero-center galvanometer for d-c null detection. Its accuracy is more than sufficient for most routine measurements of these quantities. Its price, complete with self-contained batteries, is only $240.00. May we send you complete information?

GENERAL RADIO CO.
Cambridge 39, Massachusetts
NEW YORK CHICAGO LOS ANGELES

For more details circle NED-4071 on enclosed inquiry slip

The *knurling* on the head of the UNBRAKO Socket Head Cap Screw saves valuable assembly time because the UNBRAKO can be screwed in faster and further with the fingers—the handiest of all wrenches—before a wrench is needed. The slip-proof knurling "gears" the screw to the fingers, even when they are oily or greasy . . . this is especially important in the smaller sizes.

So, use Knurled UNBRAKO Socket Head Cap Screws and save time and money.

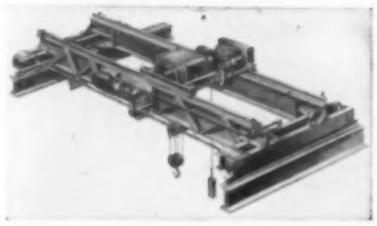
Write for further information.

SOCKET **UNBRAKO** SCREWS

SPS STANDARD PRESSED STEEL CO.
JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-4072 on enclosed inquiry slip

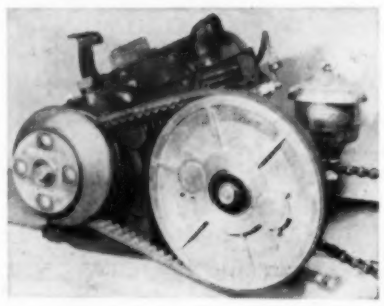
OVERHEAD TRAVELING CRANE
built in capacities to 12 tons



Constructed of stock parts and components, E type traveling cranes for intermittent duty are obtainable at substantially lower cost than previous models. Span capacities range from 20 to 60 ft. Cranes are usually operated from floor by means of pendant pushbutton control station. Bridge or trolley can be supplied without motors for handpower operation, or crane can be furnished with cab control. Incorporated in design are fluid drive, magnetic control, low headroom requirement, rigid bridge, and elimination of useless weight. Made by **Whiting Corp.**, S. Lathrop Ave., Harvey, Ill.

For more details circle NED-4073 on enclosed inquiry slip

AUTOMATIC TRANSMISSION
is variable-speed V-belt type

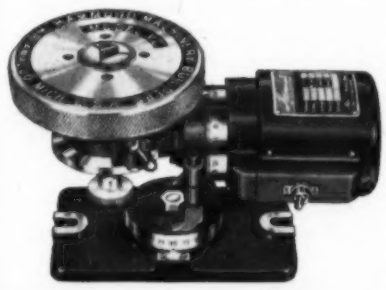


With performance characteristics similar to those of true torque converter, this Maximatic model AA 5-hp automatic transmission combines automatic clutch action, speed-responsive shifting, automatic torque response and infinitely varying ratios between 4:1 and 1.6:1. Principal components are high strength aluminum alloy pressure die-castings with steel inserts for hubs, and all steel parts are rustproof. Unit can be used on scooters, motorbikes, motorcycles, industrial trucks, garden tractors, air compressors and pumps. Made by **Diesel Pump & Electric Mfg. Co.**, 11845-NE Teal Mar Vista, Culver City, Calif.

For more details circle NED-4074 on enclosed inquiry slip

CARBIDE INSERT GRINDING FIXTURE
in motor and hand operating styles

Fast and accurate grinding of chip-breaker grooves in round, square, triangular and rectangular shapes and rough and finish grinding of dull or damaged solid carbide insert tools is performed by model VC grinding fixture. Unit is available with lug base for use on most types of tool and surface grinders but can be mounted without base on Hammond models CB-77, CB-76 and C-4 carbide tool and chip breaker grinders. Made by **Hammond Machinery Builders, Inc.**, 1622 Douglas Ave., Kalamazoo 54F, Mich.



For more details circle NED-4075 on enclosed inquiry slip

WHAT'S THE CAPACITY OF A DEEP-DRAWN SHELL?

Hackney Seamless Shapes and Shells have been made with capacities as small as 1 quart and as large as 110 gals. Inside diameters have ranged from approximately 3 inches up to 32 inches.

But no matter how big or how small a Hackney Shape or Shell may be, users gain many exclusive advantages: decreased overall weight, greater strength, faster production, elimination of expensive machining operations, greater durability, improved appearance, lower costs.

Why not see if Pressed Steel Tank Company engineers can help you to adapt special shapes — to improve existing products — to develop new products? Write for full details.

This stainless steel container is typical of the results of cold drawing. Lightweight, durable, handsome. Note mild steel reinforcement ring around bottom.

PRESSED STEEL TANK COMPANY
Manufacturers of Hackney Products
Main Office and Plant: 1450 S. 66th St., Milwaukee 14 • 1324 Vanderbilt Concourse Bldg., New York 17 • 255 Hanna Bldg., Cleveland 15 • 936 W. Peachtree St., N.W., Room 136, Atlanta 3 • 208 S. LaSalle St., Room 779, Chicago 4 • 578 Roosevelt Bldg., Los Angeles 14.

CONTAINERS FOR GASES, LIQUIDS AND SOLIDS

For more details circle NED-4076 on enclosed inquiry slip

HOW MUCH DO POWER THROBS COST YOU?

In production loss?
In wear and tear of machinery?
In maintenance?

BIG SAVINGS result from remedying the common source—*poor couplings.*

Type "H" for heavy duty with overall smoothness. Special safeguard.

LOVEJOY L-R Flexible Couplings

Most effectually counteract misalignment, vibration, surge, back-lash by simplest construction resilient, free-floating load cushions suspended between strong metal jaws. Cushions for every duty 1/6 to 2500 h. p. NO SHUT-DOWNS FOR CHANGING. No lubrication.

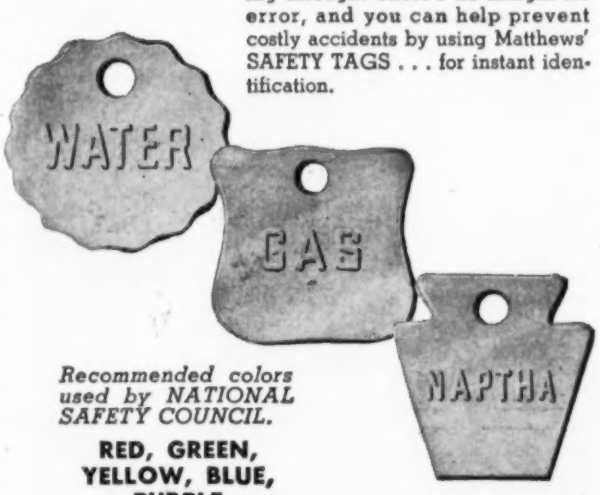
Get the complete Lovejoy Catalog, and see for yourself!

Quick-finding Selector Charts lead you right to the couplings you need. Write, wire or phone.

LOVEJOY FLEXIBLE COUPLING CO.
5003 W. Lake St., Chicago 44, Ill.

For more details circle NED-4077 on enclosed inquiry slip

Are your workmen positive every time they open a valve or repair a pipeline that a safe material is flowing through? There's no margin for error, and you can help prevent costly accidents by using Matthews' SAFETY TAGS . . . for instant identification.



Recommended colors used by NATIONAL SAFETY COUNCIL.

RED, GREEN, YELLOW, BLUE, PURPLE

Inexpensive, permanent Matthews' SAFETY TAGS, installed on every exposed pipeline, and every valve or junction, offer triple protection . . . the distinct shape, the brilliant color and the inscription you specify are your guarantee of instant and positive recognition of the type of material flowing through the pipeline. Don't take chances . . . write Matthews today for complete information, Bulletin D-4914 and sample SAFETY TAGS.

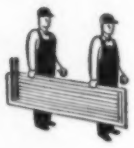
JAS. H. MATTHEWS & CO.
3943 FORBES ST., PITTSBURGH 13, PA.
NEW YORK BOSTON PHILADELPHIA CHICAGO
NEWARK SYRACUSE CLEVELAND CINCINNATI
DALLAS BIRMINGHAM LOS ANGELES

For more details circle NED-4078 on enclosed inquiry slip

Replaces Pipe Coil

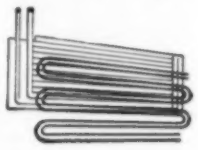
LESS MAINTENANCE

Weighs less than half as much as equivalent pipe coil. Platecoil is easy to handle. Installation can be made in ½ hour by one man and a helper.



MORE PRODUCTIVE CAPACITY

Platecoil has more prime surface per sq. ft. of area than pipe coil, heats faster, and leaves more tank space for production work.



NO LOSS OF SOLUTION

Platecoil can be removed from outside of tank in a matter of minutes without dumping. All connections above liquid level.

PLATECOIL Division
KOLD-HOLD MFG. CO.
LANSING 4, MICHIGAN

Write Today For New Free Bulletin No. P57

For more details circle **NED-4079** on enclosed inquiry slip

MILL IT ON YOUR LATHE

WITH A PALMGREN MILLING ATTACHMENT

CONVERT LATHE IN 10 SECONDS.

Now — you can do milling, slotting, grinding, grooving, squaring shafts, sawing at angles, and many other important operations on your lathe. PALMGREN MILLING ATTACHMENT is a necessary fixture for small shops, schools and emergency work in large plants. Fits South Bend, Atlas, Craftsman, Logan, Sheldon and all other makes. It has graduation for rotary angle adjustments, also graduated feed and adjustment screw. Easily mounted by straddling lathe's regular tool post. Try one—it will quickly pay for itself.

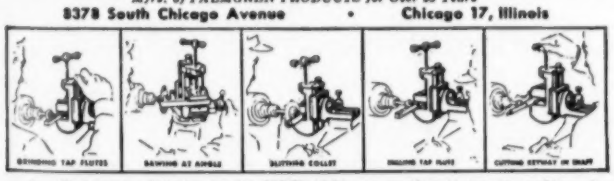
No. 250

IMMEDIATE DELIVERY

Nos.	Width Jaws	Depth Jaws	Jaws Open	Weight Pounds	Base Opening	Price F.O.B. Factory
150	1½"	1"	1⅝"	6½	1"	$18.75
250	2½"	1 7/16"	2½"	11	1½"	24.75
400	4"	1½"	4"	25	2"	39.75

Order from your dealer or jobber. Write for circular No. 355

CHICAGO TOOL AND ENGINEERING CO.
Mfrs. of PALMGREN PRODUCTS for Over 35 Years
8378 South Chicago Avenue • Chicago 17, Illinois



For more details circle **NED-4080** on enclosed inquiry slip

NP PRE-ENGINEERED Pneumatic DOOR OPERATORS

- Speed material handling
- Isolate dust and fumes
- Isolate fire hazards
- Reduce cost of air conditioning and heat

Powered by the air engine that operates the car doors of the world's subways

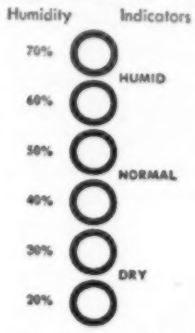
Write for bulletin DC-102

NATIONAL PNEUMATIC CO., INC.
Boston • Graybar Bldg., New York • Chicago

For more details circle **NED-4081** on enclosed inquiry slip

HUMIDITY INDICATORS cards show moisture in packages

Covering humidity range from 20 to 70 per cent, these low-cost moisture indicating cards are accurate within 5 per cent of scale. Reversible indicator reads at color change, will not dust or give off hard particles, and retains long-term calibration unless wetted by humidities in excess of 95 per cent. If wetted, colors will run to indicate dangerous humidities have been encountered within package. Cards can be made to specifications, and plastic covering and eyelets are available. Samples can be obtained without cost. Made by **Humidial Co.**, 864 Edgehill Dr., Colton, Calif.



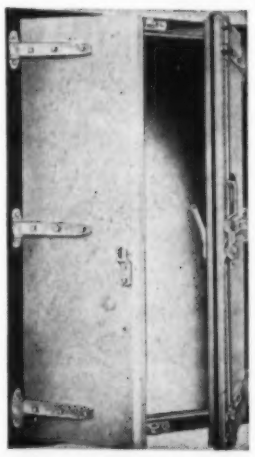
For more details circle **NED-4082** on enclosed inquiry slip

ROTARY SNAP SWITCH is rated at 15 amp 125 v ac

Compact and totally enclosed, No. 2800 rotary snap switch is offered in wide variety of circuit sequences including double and single pole series-parallel, electrolier, and on and off circuits. It can be supplied with four positions or limited position. Switch body is 1¾ in. high x 1⅜ in. wide x ¾-in. deep. It is usually furnished with type S shaft, but special shafts can be supplied. If desired, black, white or colored plastic indicating rotary switch handles can be furnished. Made by **Ark-Les Switch Corp.**, 42 Water St., Watertown 72, Mass.

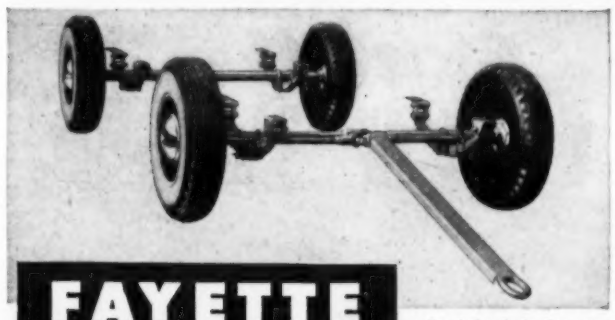
For more details circle **NED-4083** on enclosed inquiry slip

INSULATED GAS-TIGHT DOOR designed for processing operations



Recommended for use in chemical, food, products finishing, cleaning and other processing industries, this insulated gas-tight door is applicable when gases, vapors, steam and smoke are utilized or generated. It is suitable also for infrared and other high temperature drying rooms. Because of its size, it is possible to run trucks or racks of material through doorway. Features include adjustable sealing bars on all four sides of door, three-point interconnected fastener, heat-resistant gasket, rigid construction and use of high temperature glass fiber insulation. Made by **Jamison Cold Storage Door Co.**, Hagerstown, Md.

For more details circle **NED-4084** on enclosed inquiry slip



FAYETTE Precision Built UNDERCARRIAGES

Straight Axle Steering Assemblies are available as 2 or 4-wheel units. Capacity up to 12,000 lbs. Rugged construction for hauling heavy duty equipment under all operating conditions.

CUT ASSEMBLY COSTS OF PORTABLE EQUIPMENT

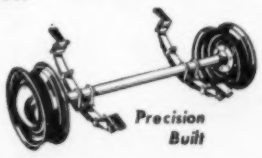
By simply making the necessary bolt or welded attachments, your trailer or portable equipment is ready to roll on a precision built Fayette Undercarriage.

Loads move easier, track truer, because of precision construction.

Save money three ways . . . Simpler installation of completely assembled unit. Longer life, trouble-free service. Lower initial cost.

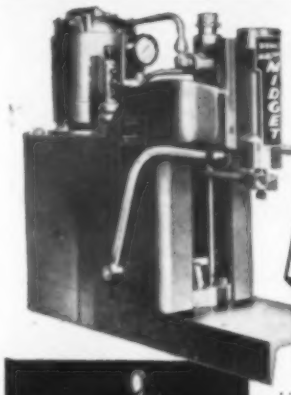
Tell us your transport needs and our engineers will recommend a practical solution to your problem.

WRITE TODAY for complete specifications on standard Fayette Undercarriage Assemblies and information on specially designed units for your particular portable equipment.



FAYETTE MANUFACTURING CO.
420 Front St. • Fayette, Ohio

For more details circle **NED-4085** on enclosed inquiry slip



Highest Efficiency per Equipment Dollar in Hydraulic Press History!

You can stop wasting *unused equipment capacity . . . floor space . . . production time . . .* and *skilled labor costs*—on almost any jobs using pressures up to 2000 pounds.

The pace-setting Multipress MIDGET is your answer! Hundreds of users tell of *doubled* production, fewer rejects, improved products, easier operation, and many other gains.

The MIDGET, a compact, *complete* oil-hydraulic press, gives you finger-tip control of ram stroke, speed, and pressure. The ram applies any preset pressure *wherever it contacts work*—off sized parts won't cause trouble, and reject-free production doesn't depend on operator skill. Dual hand-lever controls assure safe operation. Light weight, easy adjustability, and quick tool changes make the MIDGET easy to switch from one job to another. For assembling, forming, trimming, crimping, drawing, pressing, riveting, blanking, broaching or similar jobs—Multipress MIDGET offers top efficiency. Write!

PRODUCTION UP 36%

Switching to Multipress MIDGET to press bushings into gear covers increased production from 265 to 360 per hour. Average gain for all Multipress units used by this plant is *three times* the old production rate!

The DENISON Engineering Company
1151 Dublin Rd.
Columbus 16, Ohio

DENISON HydrOILics

For more details circle **NED-4086** on enclosed inquiry slip

MERRILL LIFTING CLAMPS

THE HEAVIER THE LOAD THE TIGHTER THE GRIP!

Safer and Speedier Lifting at Less Cost...have made MERRILL-Volz LIFTING CLAMPS the choice of large Steel Mills everywhere.

SAFER
- Safety factor of 5 to 1.
- Factory tested at double rated capacity.

GREATER SPEED AT LESS COST
- Entirely Drop Forged and Heat Treated.
- Working parts entirely enclosed.
- Pins do not rotate in frame eliminating wear.

Available in Stainless Steel.

Sold by Better Distributors Everywhere.

MERRILL BROTHERS
66-13 Arnold Ave., Maspeth, N. Y.

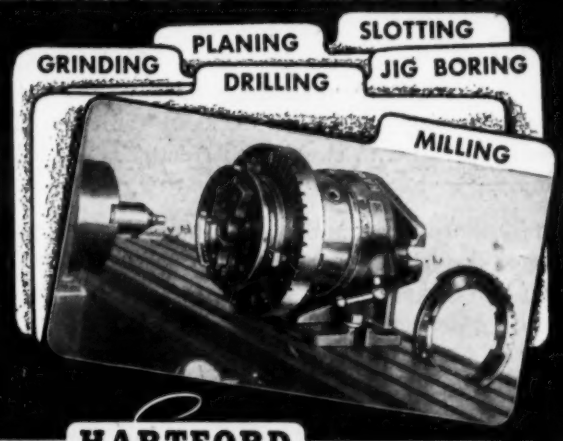
Producers of DROP FORGED SHACKLES, CLEVIS NUTS, TURNBUCKLES & EYE BOLTS.
Write for new CATALOG 10

DROP FORGINGS SINCE 1845

For more details circle **NED-4087** on enclosed inquiry slip

The most versatile fixture for quick accurate indexing... SUPER-SPACER

This fixture allows rigid control of accurate machining operations within its scope at speeds and feeds limited only by the capacity of the holding means and the power of the machine. Standard mask plates have 2, 3, 4, 6, 8, or 12 divisions. Specials made to order. All Super-Spacers come complete with mask plates, Universal chuck and chuck wrench. Write for Bulletin S-101.



HARTFORD Special

The HARTFORD SPECIAL MACHINERY Co., Hartford 5, Conn.

For more details circle **NED-4088** on enclosed inquiry slip

"COMMERCIAL"

Purchasing agents and designers can avoid costly tools and dies by getting a Commercial "Shape Book".

This Booklet shows a number of circular shapes that can be economically used in designs in various articles, and will show a reduction in costs, make easier assembly but increase the mechanical advantages.

Write for the Shape Book — no tool or die charges for these standard shapes.

THE COMMERCIAL SHEARING & STAMPING CO.
P. O. BOX 719 YOUNGSTOWN 1, OHIO

▲ For more details circle **NED-4092** on enclosed inquiry slip ▲

At Fred Heinzelman & Sons
NEW YORK, N.Y.

Pangborn Hydro-Finish CUTS HAND POLISHING OF DIES 60%
reports Mr. J. L. Crosby, General Manager

***Shown here** is the Pangborn Hydro-Finish unit which set new records at Fred Heinzelman & Sons. A pioneer of heat treated dies, the company reports: Hydro-Finish removes heat treat oxide discoloration, cuts hand polishing 60% to 70% and holds tolerances to a precision .0001"!*

Find out how HYDRO-FINISH *can save you money*

Hydro-Finish is the answer to modern cleaning, decorating and finishing problems. As Fred Heinzelman & Sons have found, Hydro-Finish virtually eliminates tedious and expensive hand buffing and polishing on tool and die maintenance.

And, on the production line, Hydro-Finish assures better bonding, electroplating, painting—gives you *the surface you want* within .0001" with no pits, grooves or hard-to-clean imperfections left after cleaning.

For full information on the many ways Hydro-Finish can save you money, write today for Bulletin 1400 to: PANGBORN CORPORATION, 1294 Pangborn Blvd., Hagerstown, Maryland.

Pangborn
BLAST CLEANS CHEAPER
with the right equipment for every job

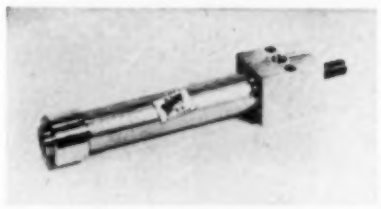
▲ For more details circle **NED-4093** on enclosed inquiry slip ▲

CONVEYOR FLOOR LOCK provides stability and alignment

Hand operated cam and lever type Pelican floor lock for portable conveyor units raises casters 1/16-in. off floor and locks entire end of unit in position. Three-point contact between floor bar and caster carriage to prevent wobble and twisting is provided by spring cylinder and two vertical pins welded to floor bar near each end. Release of cam engages caster, and strong spring holds lock 1 in. above floor and free of obstructions. Made by **Metzgar Co.**, 416 Douglas St. N. W., Grand Rapids 4, Mich.

▲ For more details circle **NED-4094** on enclosed inquiry slip ▲

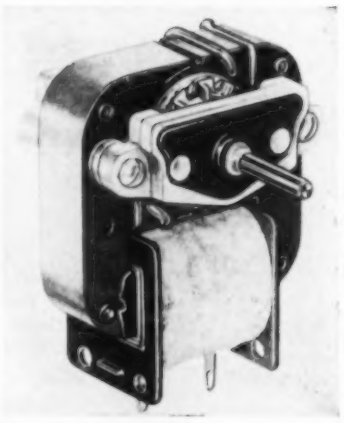
HIGH-PRESSURE CYLINDER VALVE for air, oil or water service



Fabricated from solid brass stock, model C-1000 cylinder valve has pressure range up to 1500 psi and can be energized by any type of valve control. Standard cylinders are drilled and counterbored for mounting either on piston rod end or on side or foot. Valve is furnished as double-acting type, but single-acting model with internal springs or other special types are available to specification. Unit employs self-adjusting packing and is supplied with stroke length to suit requirement. Made by **Airmatic Valve Inc.**, 1641 E. 40th St., Cleveland, O.

▲ For more details circle **NED-4095** on enclosed inquiry slip ▲

FRACTIONAL-HORSEPOWER MOTOR in ratings from 1/200 to 1/50-hp



Suitable for use in fans, blowers, heating equipment and similar products, type 230 fractional horsepower motor produces uniform air gap around stator which results in even cooling and quiet operation. It has flat speed-torque curve and high starting and pull-up torque. Motor is produced in both De Luxe and Economy models. Made by **Russell Electric Co.**, 4501 S. Western Blvd., N. R. Dept. 25, Chicago 9, Ill.

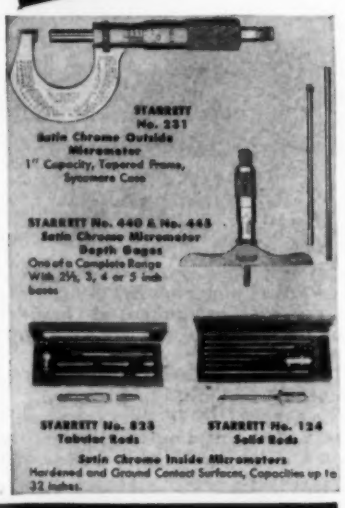
▲ For more details circle **NED-4096** on enclosed inquiry slip ▲

DEPEND ON—INSIST ON Starrett SATIN CHROME

OUTSIDE MICROMETERS
INSIDE MICROMETERS Tubular Rods
INSIDE MICROMETERS Solid Rods
MICROMETER DEPTH GAGES

All 4 with Satin Chrome Finish

Starrett *Satin Chrome* Finish means no squinting, no shifting to better light. Markings always stand out sharp, clear and easy to read. And for lasting accuracy, you get the added advantage of high resistance to stains and corrosion. Insist on STARRETT Micrometers with *Satin Chrome Finish.*



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MECHANICS' HAND MEASURING TOOLS AND PRECISION INSTRUMENTS · DIAL INDICATORS · STEEL TAPES · HACKSAWS BAND SAWS AND BAND KNIVES · PRECISION GROUND FLAT STOCK
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NEWEST MODELS IN A REAL PROFIT LINE

CONTINENTAL MOTORS · Powerful as the Nation · AMERICA'S STANDARD

TWO OF THE NEWEST

With its introduction of the Red Seal AV7 and AV7-B Vertical Shaft models, Continental Motors has further rounded out one of the industry's real profit lines. Quick-starting, dependable Continentals are now available from ¾ to 2 h.p., in shapes and profiles to meet the needs of virtually every application. They're quality-built throughout—and they feature wide interchangeability of parts from model to model, facilitating service and reducing dealer investment required.

TOP: Continental AC5 and AC6 featuring underslung suction-type fuel tank and ultra-low profile, develop ¾ to 1, and 1½ h.p. respectively. BOTTOM: Continental's new AV7 and AV7-B develop 1½ and 2 h.p. respectively. Jet-type lubrication, with positive oil pump. Interchangeability with other engines assured by design of mounting-plate.

FOR FULL INFORMATION, WRITE

Continental Motors Corporation
AIR-COOLED INDUSTRIAL ENGINE DIVISION
620 FORD BUILDING • DETROIT 26, MICHIGAN

▲ For more details circle **NED-4098** on enclosed inquiry slip ▲

here's an *Opportunity*

TO CHECK UP ON YOUR FAN NEEDS

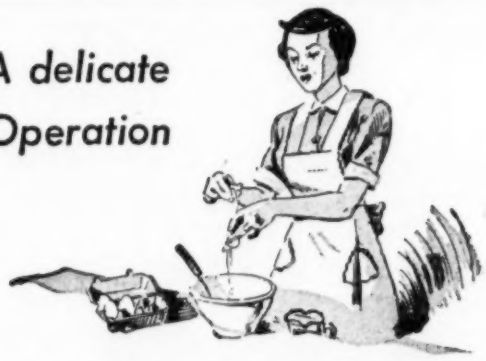
- ✓ Ventilation
- ✓ Roof Ventilation
- ✓ Quiet Ventilation
- ✓ Man Cooling
- ✓ Changing Needs
- ✓ Pulley Drive
- ✓ Explosion-Proof
- ✓ Acid-Proof
- ✓ Duct Fans
- ✓ Blowers
- ✓ Pent-Houses
- ✓ Air in Volume

Our new "check list" folder covers all of these subjects . . . tells you how to handle them economically and resultfully . . . helps avoid air-moving mistakes. Send for it *now*. It's free, and it's mighty handy to have. If a particularly tough air problem has been pestering you, chances are it'll point to the solution. And right now is none too early to prepare for the hot summer months. They'll be here before you know it . . . and *then*, it will be too late. Don't get caught with your production down. Send for the Hartzell check list now!

HARTZELL PROPELLER FAN CO.
DIV. OF CASTLE HILLS CORP.
DEPT. G PIQUA, OHIO
ENGINEERING OFFICES IN PRINCIPAL CITIES

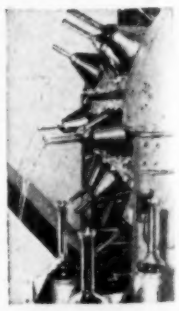
▲ For more details circle **NED-4099** on enclosed inquiry slip ▲

A delicate Operation



Separating the yolk from the white is a delicate operation. In industry, too, cases arise requiring careful handling of the product With the engineering and fabrication at Allied a special conveyor that operates without hesitation or jerk was conceived, built and installed to convey delicate television tubes during a screen, film depositing operation.

You may have a handling peculiarity in your own plant. An Allied experienced material handling man can help you. Make an appointment with him today; phone TWinbrook 2-3040 or write *Allied Steel & Conveyors, Inc., 17326 Healy, Detroit 12, Michigan.*



Settling Conveyor applies phosphor deposit to television tubes.

CONVEYORS AND CONVEYOR SYSTEMS
—designed, fabricated, erected—or present systems remodeled and rearranged

ALLIED DOES THE WHOLE JOB . . . from beginning to end!

▲ For more details circle **NED-4100** on enclosed inquiry slip ▲

as seen in National's Research Laboratories, raw materials and finished products are constantly checked for performance standards.

National's Continuous Research —*the answer* to your Improved Profitable Products

Research to develop new materials to fit exactly the needs of industries, where plastics practically find efficient use, is a never-ending project at National. Here, with the aid of the finest research devices and facilities, National's experimental men are constantly working to aid you.

It will pay you to use—

NATIONAL VULCANIZED FIBRE — A tough, horn-like material with high dielectric and mechanical strength. Excellent machinability and forming qualities, great resistance to wear and abrasion, long life, light weight. Sheets, Rods, Tubes, Special Shapes.

PHENOLITE Laminated PLASTIC — About one-half the weight of aluminum, possesses an unusual combination of properties—a good electrical insulator, great mechanical strength, high resistance to moisture; ready machinability. Sheets, Rods, Tubes, Special Shapes.

National Research and Engineering Service are available to you, without obligation—to help you solve your specific development problem. Write us—

NATIONAL VULCANIZED FIBRE CO.

WILMINGTON, DELAWARE Since 1873 Offices in Principal Cities

▲ For more details circle **NED-4101** on enclosed inquiry slip ▲

DEFLATING BAGS WITH VACUUM

Vacuum producers used to exhaust air from bags containing dynamotors; then packages are heat-sealed and enclosed in rugged wooden boxes. This packaging combats corrosion on equipment and silica gel in packages absorbs moisture.

Hot water bags and other rubber goods are cleaned and deflated just before shipment.

Spencer Vacuum is also used to convey materials to or from freight cars, and in the packaging and shipping rooms.

356-T

150 USES FOR VACUUM...ASK FOR BULLETIN

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT

SPENCER HARTFORD

▲ For more details circle **NED-4102** on enclosed inquiry slip ▲

This Air Compressor is SAFE

It's Equipped With a

BS & B SAFETY HEAD!

The Black, Sivalls & Bryson SAFETY HEAD, containing a rupture disc which bursts at a predetermined pressure, stands sleepless guard over this air pressure system. Whenever overheating, mechanical failure or a faulty control causes a suddenly mounting over pressure—a relief valve may not react to it, but the B S & B SAFETY HEAD does! Before the critical point, it bursts . . . and disaster is averted! Investigate this inexpensive protection for your property now. Write today to Black, Sivalls & Bryson, Inc., 720 Delaware, Sec. 5-85-6SH, Kansas City 6, Missouri.

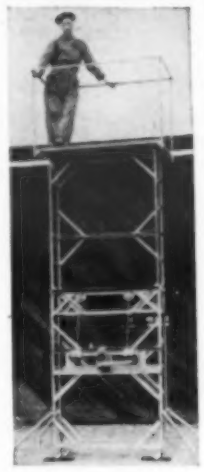
Ask for a B S & B Engineer to call.

Black, Sivalls & Bryson, Inc.

KANSAS CITY TULSA OKLAHOMA CITY

▲ For more details circle **NED-4103** on enclosed inquiry slip ▲

EXTENSION SCAFFOLD is raised by cranking



Measuring 6-2/3 ft high, this Marquee Servicer can be raised to 11½ ft for overhead maintenance or painting. Base is 28 x 48 in., and standard platform measures 24 x 48 in. Special sizes can be made to order. Raising is accomplished by hand-operated winch with self-locking worm gear held by two steel cables. Outrigger braces prevent tilting or rolling. Unit is of all-welded steel construction and is easily moved. Made by **Atlas Industrial Corp.**, 845ND 39th St., Brooklyn 32, N. Y.

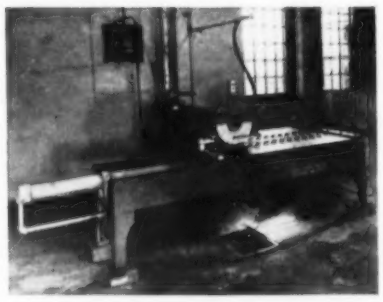
▲ For more details circle **NED-4104** on enclosed inquiry slip ▲

SMALL SPEED REDUCER has ratios of 25:1 to 1764:1

Originally designed to move displays loaded up to 1500 lb with various items of merchandise, type DBRA double reduction speed reducer can be used also for operating many other devices such as small centrifugal fans or fuel stokers. Totally enclosed in single-piece housing, it offers power range of 1/20 to ⅛-hp and can be obtained in 24 right-angle drive assemblies. Made by **Winfield H. Smith Corp.**, 22 Eden St., Springville, Erie Co., N. Y.

▲ For more details circle **NED-4105** on enclosed inquiry slip ▲

CUTTING & RESIZING MACHINE uses diamond segmented wheel



This hydraulic-feed cutting and resizing machine is designed for recutting switchboard stock as well as cutting panels of slate, marble, soapstone, ebony asbestos, Micarta, kraft paper board, etc. Handling maximum diameter wheel of 16-in. with 1-11/16-in. arbor, machine has 24-in. clearance and table capacity of 36 x 60 in. Arbor cartridge is full ball bearing, and main head is adjustable for cutoff heights up to 4 in. Standard 10-hp motor is equipped with variable feed and reversing speeds from 0 to 36 in. per minute. Cutting feed is controlled by ammeter, and four-way valve controls hydraulic systems. Post contains 12-gal oil storage, and hydraulic system utilizes No. 20 SAE engine oil. Made by **Gray Foundry, Inc.**, 100 Furnace St., Poultney, Vt.

▲ For more details circle **NED-4106** on enclosed inquiry slip ▲

FREE... 8-Question Check Chart Exposes High Cost Manual Handling

Do you know that *manual handling* represents as much as 36% of every production dollar spent?

This excessive cost can be cut down drastically, when the "HIDDEN COSTS" of hand-handling material from receiving, through production and shipping, make way for *mechanized* handling.

The revealing material handling CHECK CHART we offer, enables you to spot "hidden handling" costs in a matter of minutes. When you go over its 8 important questions, you will see why so many important manufacturers are switching to *mechanized* handling with Automatic Electric Trucks.

With these versatile trucks, you can *lift*, *move* and *stack* material at 50% to 75% *less cost* in man-hours and wages saved, faster production flow, and free storage. Besides, men work *refreshed*, because electric power does the work.

GET THIS IMPORTANT CHECK CHART and cash in on the revealing handling ideas its 8 questions disclose. If you answer "No" to more than 4 of the 8 questions, you will understand why Automatic Electric Trucks can earn your business a real money-making material handling bonus. Write today!

TRADE Automatic MARK
61 West 87th Street,
Dept.H-5, Chicago 20, Illinois

Automatic ELECTRIC TRUCKS — Lighten Life's Loads

▲ For more details circle **NED-4107** on enclosed inquiry slip ▲

R & M HOIST takes an 8500 POUND-ing more than 90,000 times

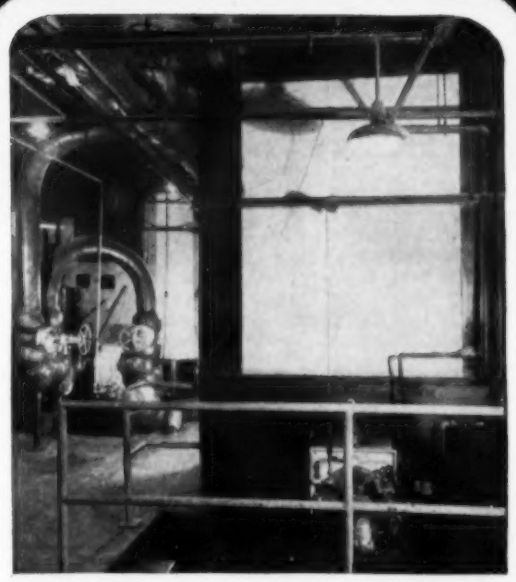
. . . and it's still going strong! Now in service for more than two years with only minor repairs, this Robbins & Myers electric hoist is saddled with these back-bending responsibilities: A weight of 8500 lbs., always attached to the hoist hook, is raised and lowered 15 feet. The operating cycle varies from 12 to 18 round trips every hour, 8 to 12 hours daily. That's an average of 150 round trips daily for 300 days a year, or 90,000 lifts of 8500 lbs. each. This is equal to lifting this weight 1,350,000 feet. Here is a typical performance for R & M Electric Hoists. Capacities from 250 lbs. to 20,000 lbs. If materials handling is your problem . . . "Take it UP with R & M." Write for details.

ROBBINS & MYERS, INC.
HOIST & CRANE DIVISION, SPRINGFIELD 96, OHIO

▲ For more details circle **NED-4108** on enclosed inquiry slip ▲

Super Temperature without Pressure by the

MERRILL PROCESS System of Hot Oil Circulation



1,600,000 B.t.u. per hour system at Stein-Hall & Company, Inc., Long Island City, New York, manufacturers of starch products

Does your process require a smooth, even flow of heat?

At temperatures far beyond the range of steam, with negligible pressure, and without the hazard of direct fire?

That is the MERRILL PROCESS

For over thirty-two years, hundreds of users have enjoyed these advantages in plants such as:

Chemical — Heating and Evaporating
Roofing — Asphalt Shingles—Roll Roofing
Vegetable Oil — Deodorizing
Resins — High Temperature Heating
Wire and Cable — Impregnating
Tank Cars — Unloading
And many other uses

Full information with illustrations on request

Parks-Cramer Company
FITCHBURG, MASSACHUSETTS

▲ For more details circle **NED-4109** on enclosed inquiry slip ▲

Outwear ordinary work gloves 3 to 9 TIMES—Cut your costs

Edmont gloves coated with **NEOX** (reinforced neoprene)

resist cutting and abrasion as well as oil, acid, caustic, solvents.

Strong lining reinforces, prevents snags, makes gloves comfortable, easy on and off.

In overall or palm and thumb coated styles. Also natural rubber or plastic.

We can show you the records of many on-the-job tests, on a great number of operations, where workmen wore out 3 to 9 ordinary gloves on either hand, while wearing a single Edmont coated-fabric glove on the other. Direct cost-savings range from 40% to 70% on most work. Let us prove it.

SPECIAL TEST OFFER — Write today for sample, stating operation, material handled and temperature conditions. Recommended gloves will be sent without cost for comparative test and report. Address EDMONT MFG. CO. 503 Orange St., Coshocton, Ohio. World's Largest Maker of Coated Gloves.

Edmont FABRIC-LINED NEOX-COATED **GLOVES**

For more details circle **NED-4110** on enclosed inquiry slip

Packaging costs cut up to 25% with Stanley Steel Strapping!

—Says The Fafnir Bearing Co.

Stanley Steel Strapping is quick and easy to apply—saves man-hours and materials—gives greater protection to goods in transit. System includes tools, reels, accessories—all you need for *your own* application. Write for details or demonstration now! The Stanley Works, Steel Strapping Div., 177 Lake St., New Britain, Conn.

STEEL STRAPPING AND CAR BANDING SYSTEMS

STANLEY

Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

For more details circle **NED-4111** on enclosed inquiry slip

SIMPLY ADD A *Trojan* TRACTOR for POWER TRAVEL

The Trojan Tractor is a compact, low cost unit, power driven, that will push and pull existing hand traveled material handling equipment—and make it do more work faster. It is quickly attached through a simple draw bar.

THE TROJAN TRACTOR PRICES BEGIN AT $360

Bulletin 810 tells more about the Trojan; fill in your company name, address, and send in this advertisement for a copy.

DETROIT HOIST & MACHINE CO.
8247 MORROW ST. • DETROIT 11, MICH.

Company_____

Address_____

For more details circle **NED-4112** on enclosed inquiry slip

WIDE-ANGLE SPRAY NOZZLE designed for low flow rates

Fine uniform drop sizes with 180-degree umbrella spray pattern of wide coverage are obtained by this spiral-design nozzle. Requiring extremely low pressures, nozzle is relatively nonclogging and can be cleaned easily on job by means of removable pin. Pin itself is interchangeable to provide for different flow rates. Nozzle is available in two sizes with capacities of ½ to 2 gpm and 1½ to 4 gpm. Made by **Bete Fog Nozzle Co.**, 276 Main St., Greenfield, Mass.

For more details circle **NED-4113** on enclosed inquiry slip

PHOTOCHEMICAL LAMPS activate many industrial processes

Designed to emit maximum energy in commonly utilized wavelengths near 3650 Angstrom units, three lamps are suitable for chlorination of hydrocarbon, bromination, hydrogenation, polymerization, decomposition and other industrial photochemical processes as well as processing of blueprints and creation of 'black light' effects. Using Vycor glass, type C-H9 3-kw lamp produces about 50 per cent more ultraviolet light at 3650 Angstroms than its predecessor B-H9. It operates at 535 v and 6.1 amp with starting current of 9.3 amp, has average rated life of 2000 hours, is 56 in. long and can be burned in any position.

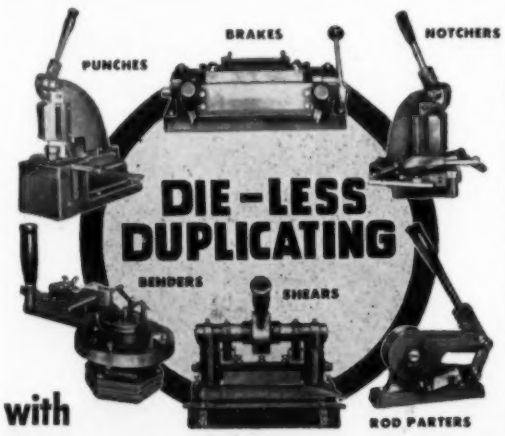
Type A-H14 rated at 940 w is smaller version of above type. It operates at 250 v, 4.2 amp, with starting current of 9 amp. Length is slightly over 29 in. Type A-H13 is 1200-w unit that operates at 125 v and 10.5 amp, with 13-amp starting current. Its rated average life is 1000 hours. Made by **Westinghouse Electric Corp.**, Lamp Div., Bloomfield, N. J.

For more details circle **NED-4114** on enclosed inquiry slip

ROCK DRILL ATTACHMENT pumps water through drill

This rock drill attachment is powered by gasoline engine and permits drilling holes having diameters from 1¾ to 2⅝ in. to depth of 70 ft as aid in prospecting. By pumping water through drill, cuttings can be recovered and samples taken at any interval. Frequent sampling allows accurate determination of various strata, their depths and thicknesses. Machine can be transported behind car or truck, and pneumatic wheels allow operator to move it from hole to hole on job. Made by **Hossfeld Mfg. Co.**, Dept. NED, 460 W. Third St., Winona, Minn.

For more details circle **NED-4115** on enclosed inquiry slip



with **di-acro PRECISION MACHINES**

Eliminate dies . . . speed production . . . in both your experimental and quantity run duplicating operations. An unusually wide variety of both simple and intricate parts can be precision made by "DIE-LESS DUPLICATING" with the individual or co-operative application of DI-ACRO Precision Machines (see examples at right). DI-ACRO Machines are now offered in a total of six types and 21 different sizes, including two new units—a power driven Shear and a hydraulic Bender.

SEND FOR 40 PAGE CATALOG

ENGINEERS—DESIGNERS—PRODUCTION MEN should all have this informative catalog which contains technical data covering DI-ACRO Machines and our offer of "Die-Less Duplicating" Engineering Service to aid in solving design and production problems... WRITE FOR YOUR COPY TODAY.

O'NEIL-IRWIN MFG. CO.
354 8th Avenue, LAKE CITY, MINN.

For more details circle **NED-4116** on enclosed inquiry slip

Want to steal the show from competition?

Little lamps can make your product a star attraction

GENERAL ELECTRIC miniature lamps built into your product can add new sales appeal. Use them to give novelty, safety, convenience. General Electric makes more than 1,000 types and sizes—both filament and neon glow. Ask about the new long-life pilot lamps for appliances and other equipment where vibration is a problem. Write General Electric, Dept. 166-NED-6, Nela Park, Cleveland 12, Ohio.

MINIATURE LAMPS

You can put your confidence in—

GENERAL ELECTRIC

For more details circle **NED-4117** on enclosed inquiry slip

Proven . . . . . .

THAT A LIGHT-WEIGHT

M-SCOPE PIPE LOCATOR

FINDS "LOST" PIPES, SHORT STUBS AND VALVES QUICKER • EASIER • MORE ECONOMICALLY

MODEL AB METAL CASED CABINETS

Traces—Centers—Measures Depths Without Connection to Pipe, Cable or Earth.

PRICE $149.50

★Weighs Only 10 Lbs.
FULLY ELECTRONIC
ULTRA-STRONG POSITIVE SIGNAL
FREE LITERATURE Upon Request

FISHER

Research Laboratory, Inc.
PALO ALTO, CALIFORNIA

For more details circle **NED-4118** on enclosed inquiry slip

Your best answer to many holding problems...

Rotary Permanent Magnet Chucks

For grinding or light machining operations on rotating work—especially thin work pieces—you can save time and money by using Brown & Sharpe Rotary Permanent Magnet Chucks. Quicker, easier to use • cost nothing to operate • use no electricity • have no wires or electrical connections. Work may be held as long as desired. Available from stock in 5", 7", and 9¼" diam. Also rectangular models in six sizes up to 12" x 36". For sale only in U.S.A. and its Territories. For Bulletin, write Brown & Sharpe Mfg. Co., Providence 1, R.I., U.S.A.

We urge buying through the Distributor

BROWN & SHARPE B&S

For more details circle **NED-4119** on enclosed inquiry slip

DOLLIES, SKIDS, TRUCKS

Built to meet all tough requirements

BARREL SKIDS
Selected hardwood rails reinforced entire length with flat steel bars. Standard models are 16" wide; 8' to 16' long.

● IRONBOUND DOLLIES
The "Handy", one of a full line of dollies, has shaped frame for comfortable hand grip. Equipped with four swivel casters. 3" dia. wheels—choice of steel or rubber.

Ironbound engineers will help you with your handling problems. We design and build super structures to handle special products at lower handling costs.

● The RolTruk will "pick-up and go" with paper rolls, drums, barrels, etc. Available in several models with capacities ranging from 500 to 2000 lbs. Ask for illustrated bulletin 10RT.

Standard line of Ironbound Skids, Semi-Live Skids, Dollies and Floor Trucks is fully illustrated in Catalog GP-7. Write for a copy, today.

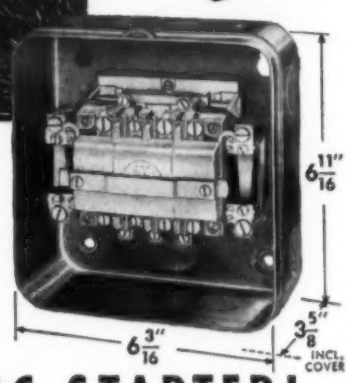
IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

SKIDS • SEMI-LIVE SKIDS • DOLLIES • FLOOR TRUCKS

For more details circle **NED-4120** on enclosed inquiry slip

EASY *to Wire to Service*

THE SMALLEST STARTER on the MARKET



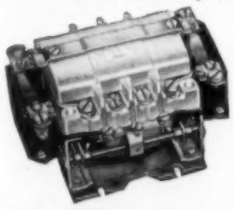
ARROW AH HART

NEW "RA" SIZE 1 MAGNETIC STARTER!

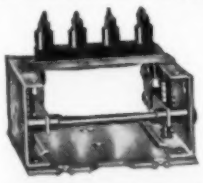
Working electricians, installation and maintenance men find the design of the new A-H "RA" Magnetic Starter makes wiring easy. It's straight through — all the way — gives plenty of wiring room in the box and saves mounting space on installation.

Servicing is easy, too. All terminals and contacts can be reached quickly — with no loss of time or motion. Lots of performance is packed into this smallest starter enclosure — 6-3/16" x 6-11/16" x 3-5/8". It's easy to install the unit into small spaces for accessibility and convenience.

BIG, TOUGH CONTACTS
Rugged, heavy duty, copper contacts, with special silver alloy tips, take plenty of punishment. Special spring-loaded keys provide speedy and easy change when maintenance is necessary. No loose parts.



PLASKON ALKYD PROTECTION
New compound in starter base and hood gives 50 to 65% higher resistance to tracking than next best material. Provides hard, durable surface and superior dimensional stability. Gives you maximum performance, safety and long life in all A-H "RA" Magnetic Starters.



FULLY BALANCED MECHANISM
Right angle *balanced* mechanism multiplies leverage — transfers it from a vertical to a horizontal plane. Increases contact pressure — reduces volt-ampere consumption. There's no extra load to lift because the right angle moving mechanism is *balanced.*

The new Type "RA" is available in sizes 0, 1, 2 and 3, to handle motors up to 50 H.P. at 440 and 550 volts.

CONTROLS and APPARATUS FOR *Outstanding* PERFORMANCE

WRITE TODAY FOR LITERATURE
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HARTFORD 6, CONN.

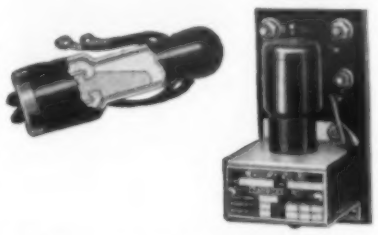
ARROW AH HART

ARROW-HART THE ARROW-HART & HEGEMAN ELECTRIC COMPANY HARTFORD 6, CONN., U.S.A.

For more details circle **NED-4121** on enclosed inquiry slip

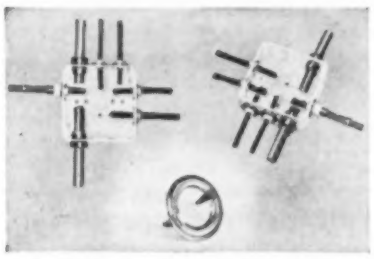
MERCURY SWITCHES & RELAYS employ triple-distilled mercury

Improved performance and longer life for these mercury switches and timer relays results from use of triple-distilled mercury from which oxidized impurities have been removed by filtering. Improved ceramic adds greatly to arcing life of both switch and timer. Resistance of both controls has been lowered by metal conditioning process that is applied to all metal parts of both devices. Made by **Durakool, Inc.,** 1051 N. Main St., Elkhart, Ind.



For more details circle **NED-4122** on enclosed inquiry slip

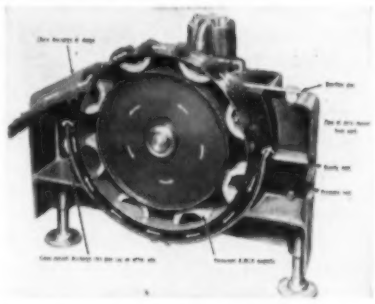
STRAIN RELIEF BUSHING ADAPTERS are quickly inserted in knockout box



Designed to fit into standard knockout box holes, adapters are available with various size holes to hold any of complete line of Heyco strain relief bushings for anchoring wires such as POSJ, SV, SJ and HPD. With use of these adapters and Underwriters' approved bushings, electrical appliances and machines can be protected from failure caused by faulty connections. They securely anchor wire to knockout box and absorb pull, push and torque. Illustration shows adapter and various size wires anchored to standard junction box with adapters. Made by **Heyman Mfg. Co.,** 99 Michigan Ave., Kenilworth, N. J.

For more details circle **NED-4123** on enclosed inquiry slip

MAGNETIC SEPARATOR maintains clean coolant supply



Recommended for use in conjunction with all types of grinding, honing, milling and shaping machines, improved Barnesdril magnetic separator constantly removes sludge consisting of metallic particles and fused abrasives from coolant. It now employs 1/20-hp gearmotor in place of fractional horsepower motor and worm drive formerly used. Installation has been simplified with direct intake of used coolant from work and discharge of clean coolant from either side of separator direct to coolant storage tank. Machine is designed for lower level intake to eliminate need for separate pump to deliver used coolant to unit. It can be obtained in 5, 10, 20 and 40-gpm sizes. Made by **Barnes Drill Co.,** 866 Chestnut St., Rockford, Ill.

For more details circle **NED-4124** on enclosed inquiry slip

for GREATEST DEPENDABILITY and EFFICIENCY in metered pressure pumping of

SULPHURIC ACID

...at all concentrations

Pumps against line pressure . . . meters accurately . . . has no stuffing box, so eliminates leakage, prevents corrosion of pump or contamination of product, avoids loss of prime . . . lowest maintenance . . . Hundreds of satisfactory installations.

Lapp PULSAFEEDER

PISTON-DIAPHRAGM CHEMICAL PROPORTIONING PUMP

WRITE for Bulletin 262 with complete description and specifications.
LAPP INSULATOR CO., INC., PROCESS EQUIPMENT DIVISION, 217 MAPLE STREET, LE ROY, N. Y.

For more details circle **NED-4125** on enclosed inquiry slip

Lower PRODUCTION COSTS WITH *KRAUS* AUTOMATIC HOPPERS

Typical Tumble Hopper

USE THEM FOR...

1. Machining
2. Assembling
3. Packaging
4. Sorting

VERSATILITY. Basic hoppers can be tooled for a wide variety of pieces.

LARGE CAPACITY. Up to 2.4 cu. ft. on 32" tumble type. Eliminates frequent reloading and saves labor.

Send samples with delivery rate and orientation requirements to:

KRAUS DESIGN INC.
946 EXCHANGE ST. • ROCHESTER 8, N. Y.

For more details circle **NED-4126** on enclosed inquiry slip

New GENERAL FILTER

for Hydraulic and Lubricating Oils

NO CARTRIDGES TO REPLACE

There are no expensive cartridges to throw away or stock. Entire unit is cleanable. First cost is only cost.

EASY TO CLEAN

Just remove one nut and all spacers and screens slide off. Wash in suitable solvent and replace. It's as simple as that.

FILTRATION TO SUIT EVERY APPLICATION

Write! *for prices and specifications. Describe your application.*

This Model 1300 GENERAL FILTER can be made to filter solids from .040 inch to 5 microns by varying the mesh of the filtering screens. Comes in two standard lengths, 8 inches and 4 inches, but can be made any length to provide capacity between 5 and 50 gallons per minute.

GENERAL FILTERS, Inc.
12890 WESTWOOD — DETROIT 23, MICH.

For more details circle **NED-4127** on enclosed inquiry slip

Completely Revised!

A 564-Page Authoritative Handbook

TOOL STEEL SIMPLIFIED

Yours for only $2.00 postpaid

Over 100,000 copies in use

Which of its 21 data-packed chapters can you use most profitably?...

Part I—Getting Acquainted with Tool Steel
Tool Steel Terms... Analysis of Tool Steel... Soundness and "Personality" of Tool Steel

Part II—Selecting the Right Steel
Alphabetical Tool Steel Selector... along with practical suggestions for selecting the one steel that will perform best, reduce costs

Part III—Properties, Heat Treatment and Testing of Tool Steel
Heat Treating Methods and Equipment (furnaces, fuels, and atmospheres)... Hardness and Toughness Testing (equipment, methods and results)

Part IV—Things Worth Knowing
Relation of Design to Heat Treatment... Hot Acid Etch Test... Timbre Test... Spark Testing... Quenching and Trouble Shooting

CLIP AND MAIL NOW

The Carpenter Steel Company, Reading, Pa. • Dept. 19C-2
Please send me, postpaid, your revised "Tool Steel Simplified".
I enclose $2.00 ($2.50 outside U.S.A.) in full payment of the book.

Name..... Title.....
Firm Name.....
Mailing Address.....
City..... State.....
(Please Print)

For more details circle **NED-4128** on enclosed inquiry slip

No hold-up for down-time!

Every Towmotor is designed for the job . . . and stays on the job, because each part is engineered for a practical *industrial* purpose. Compare Towmotor with any other fork lift truck and you will see why Towmotor's trouble-free features make every **Mass Handling** job easier, faster, safer. Write for a copy of "Handling Materials Illustrated." Towmotor Corporation, Division 25, 1226 E. 152nd St., Cleveland 10, Ohio. Representatives in all Principal Cities in U. S. and Canada.

every handling job is easier with TOWMOTOR MH!

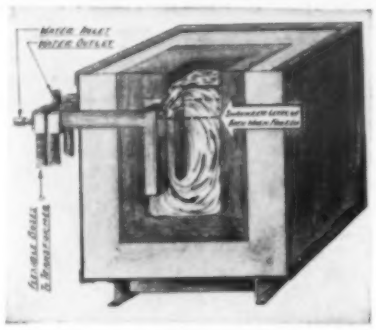
TOWMOTOR THE ONE-MAN-GANG ®

FORK LIFT TRUCKS and TRACTORS

RECEIVING • PROCESSING • STORAGE • DISTRIBUTION

For more details circle **NED-4129** on enclosed inquiry slip

SALT BATH FURNACE
equipped with submerged electrodes



Similar in design to standard Ajax Hultgren salt bath furnace, submerged electrode type is recommended for use with baths operating at temperatures from 1700 to 2400° F and for exceptionally deep baths. Electrodes enter through back wall of furnace just below surface of bath. They are closely spaced to produce electrodynamic stirring action to assure rapid heating and temperature uniformity within 5° F. Should bath freeze from any cause, salt will shrink sufficiently to expose electrodes for restarting.

Advantage of this construction for high temperature work is that life of electrodes is extended since they are not exposed to severe oxidizing action which takes place at and above bath surface. Small exposed bath surface minimizes power consumption and sludge formation. Made by **Ajax Electric Co.**, 103 Allen St., Philadelphia 23, Pa.

For more details circle **NED-4132** on enclosed inquiry slip

DRILL PRESS FEEDER
air-powered unit assures proper thrust and correct drilling action

Operating on low pressure air, this automatic feeder can be used on any small drill press. Operating features include instant reversal on breakthrough, depth control accuracy to 0.001-in. and speed of stroke infinitely variable in either direction. Accurate threads can be tapped without employing tapping head. Operation of feed is either by hand trip rod or momentary contact foot switch, and either continuous or single cycle operation can be employed. Unit can be tied-in easily with dial indexers or shuffle-board work feeders.

Feeder is available in either standard or heavy-duty models in four feed types: drill; drill with dwell; drill, chip clean and dwell; and drill and tap. Models are designed to fit all drill presses having 1¼-in. pinion shafts and can be adapted readily to shafts of other sizes. On standard models, maximum length of stroke is 2½ in. or 270 degrees of shaft rotation. Standard feed develops from 4 to 750-lb drill point thrust. Heavy-duty feeds have maximum length of stroke of 4 in. on 1¼-in. pinion shaft or 445 degrees of shaft rotation and develop from 10 to 1250-lb drill point thrust. Made by **Beckett-Harcum Co.**, 1139 Wayne Rd., Wilmington, O.

For more details circle **NED-4133** on enclosed inquiry slip

The Instrument You Have Been Waiting For!

- **SMALL SIZE LOW PRICE**
- **CONSTANT PRESSURE**
- **SLIP CLUTCH**
- **DC GENERATOR TYPE**
- **INSULATION TESTER**

New "MAJOR" MEGOHMER

With Extra Ohm Scale!

Ranges: 0-50 megohms and 0-30 ohms, or 0-10,000 ohms.
Test potential 500 volts DC.
Size: 7½" x 4" x 4"
Weight: 4 lbs. 14 oz.
In polished teakwood case, with solid leather carrying case and test leads.
True Ohmmeter movement independent of generator voltage.

A REMARKABLE INSTRUMENT . . . AT A REMARKABLE PRICE

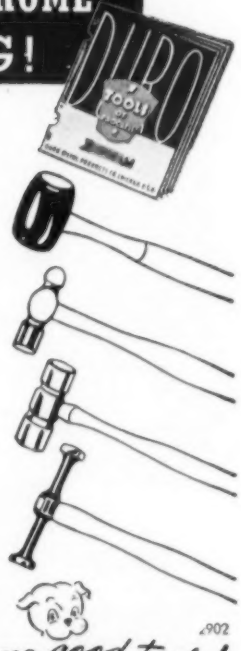
For full details write for Bulletin 465

HERMAN H. STICHT CO., INC.
27 PARK PLACE NEW YORK 7, N. Y.

For more details circle **NED-4135** on enclosed inquiry slip

WHAT'S THE *NEWEST* IN TOOLS?

Get *FREE* DURO-CHROME CATALOG!



You ought to have the colorful **Duro-Chrome** Tool Catalog. The whole Duro line features advancements which reflect in better, smoother work.

Hammers and mallets, for example. These include forged ball pein hammers, and mallets with plastic and rubber heads, as well as special hammers. Another Duro refinement is the "Hot Broached" Socket—for accurate fittings and greater strength . . . Works in close quarters.

108 Colorful Pages of News for Tool Buyers and Users

Duro-Chrome Tools appeal to management and men. For the latest in tools, write for your free copy of the **Duro-Chrome Tool Catalog! . . .**
DURO METAL PRODUCTS CO., 2649 North Kildare Ave., Chicago 39, Illinois.

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doyyone good tools!

DURO-CHROME TOOLS
FOR GRATIFYING PRODUCTION

For more details circle **NED-4130** on enclosed inquiry slip

Accurate-Dependable Batching
of light or heavy liquids

Complete Jacketed Pipe Systems for All Liquid Handling Problems

The FLUIDOMETER System is an accurate, dependable, automatic metering equipment for the batching of either light or heavy liquids. The FLUIDOMETER resets automatically. There is no lost time resetting metering controls, no errors due to incorrect resetting. Invaluable in large scale production work requiring steady repetition of operations. Available in jacketed construction for maintaining uniform temperature in process pipes. Write for new bulletin FL-49.

HETHERINGTON & BERNER INC. · 751 Kentucky Ave., Indpls. 7, Ind.

FLUIDOMETER
Automatic Metering System

For more details circle **NED-4136** on enclosed inquiry slip

Production Picks Up when Synthane is the Specified Material

Synthane plastic laminates are easily worked on standard machinery. Turned, drilled, punched, sawed or milled parts may be inexpensively produced from Synthane. Synthane is light in weight, yet finished parts made from it have the hardness, toughness, density, corrosion, abrasion and impact fatigue resistance to give peak performance and long life. Automatic screw machines and Synthane rods and tubes are an excellent combination for low cost, high speed production of smaller parts.

For information about Synthane and some suggestions about what it can do for you, clip and mail the coupon today.

TECHNICAL PLASTICS
SHEETS • RODS • TUBES
FABRICATED PARTS
SYNTHANE
MOLDED-LAMINATED
MOLDED-MACERATED

SYNTHANE CORPORATION
North East River Road, Oaks, Pa.
Please send me a copy of the complete Synthane catalog.
Name_____
Firm_____
Address_____
City_____ State_____

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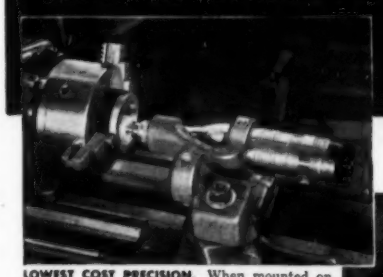
ACCURACY TO .0001" IN PRODUCTION SET-UPS

FOR AS LITTLE AS $117.50



Internal grinding on lathe with PRECISE wheel arbor mounting 1½ D. wheel.

LOWEST COST PRECISION. When mounted on standard machine tools, PRECISE SUPER 40 at speeds from 20,000 to 45,000 R.P.M. turns out precision jobs heretofore possible only on stationary machines costing up to 100 times as much.

VERSATILITY. For cylindrical, internal, external and form grinding; for milling with H.S. steel or tungsten carbide midget mills; for micro-finishing and polishing. Use on wood, glass, rubber, plastics, or any metal including the hardest alloy steel.

DURABILITY. All metal housing, rigid PRECISE quill, lubricant-sealed micro-precision bearings. ¼ H.P. AC-DC motor (115 volts) is protected by replaceable fusetrons.

ATTACHABLE COOLFLEX SHAFT. (optional) Quickly attached for bench work and handtool applications. Same speeds, same precision quill as in PRECISE SUPER 40.

Milling hardened die with tungsten carbide mill in COOLFLEX ATTACHMENT.

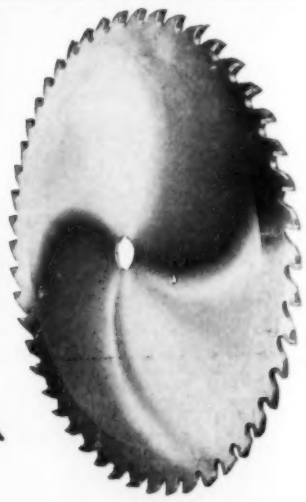
Write FOR CIRCULAR

PRECISE PRODUCTS CO., 1346 Clark St., Racine, Wis.

PRECISE SUPER 40

For more details circle **NED-4134** on enclosed inquiry slip

COST CUTTER!



Saw NON-FERROUS METALS AND PLASTICS WITH THE MOTCH & MERRYWEATHER

Carbide Tipped BLADE

Solid—up to 36" dia.
Segmental—11" to 36" dia.
Prices quoted upon request.

More cuts and more accurate cuts between regrinds add up to a lower cost per cut. Fewer regrinds also mean more usable, profitable operation. Clean, square ends minimize finishing expense. One M. & M. carbide-tipped blade has been known to outlast over 100 ordinary blades. Please define your requirements and expect a convincing recommendation.

Get full details in Bulletin 230-N.

THE MOTCH & MERRYWEATHER MACHINERY CO.
PENTON BUILDING CLEVELAND 13, OHIO
AT YOUR COMMAND · AN UNPARALLELED EXPERIENCE IN CIRCULAR SAWING

For more details circle **NED-4137** on enclosed inquiry slip

EVERY PLANT CAN USE ADJUSTABLE STEEL HORSES

They are the "work horses" in every plant or shop . . . more than pay for themselves, and are never idle because of the many uses their ready adjustability will easily serve:

SPOT WELDING TABLES
FABRICATION SUPPORTS
LAYOUT WORK
BENCHES
SCAFFOLDING
CONVEYOR SUPPORTS
MAINTENANCE WORK
And many other uses

MODELS FOR HEAVY OR LIGHT WORK

Standard length 36". Low Height 24"; Extended Height 42". Adjustable at 1½" intervals. Held in position by steel lock pins. All units portable. Painted one coat chrome yellow.

IMMEDIATE DELIVERY
Write for full information

Bruno HANDLING EQUIPMENT
BRUMMELER STEEL PRODUCTS CORPORATION
1411 Ionia Ave. S. W., Grand Rapids, Michigan

▲ For more details circle NED-4138 on enclosed inquiry slip ▲

FELT WICKS for reliable oiling

Lubrication by means of felt wicks permits oil to be fed to bearings and other moving parts, automatically and without failure or interruption. Oil control can be extremely precise, and the flow constant. Where actual oil consumption is low, bearings can be completely sealed and will require no attention between major overhauls.

Four types of wick oiler design permit you to meet the most diverse conditions, from tiny ball bearings to large rotating shafts. Felt is an engineering material, made in standardized types, offering predictable performance.

Write on your letterhead for Data Sheet No. 6, giving complete engineering data.

American Felt Company
TRADE MARK

General Offices: 62 Glenville Road, GLENVILLE, Conn.

▲ For more details circle NED-4139 on enclosed inquiry slip ▲

A simple STOCK answer to your drive problems

. . . available from stock at an amazingly low cost per horsepower

444 standard gear sets
Over 190,000 standard reducers
Only 58 standard mountings

The double enveloping principle of Cone-Drive Gears also gives you higher load capacity, longer life, less weight, greater compactness.

All parts for a given center distance —gears, mountings, bearings, housings, fan-cooling attachments and water-cooling coils (for continuous, high-load operation), etc.—are standardized whether you use pinion over or under, gear shaft vertical or horizontal, single or double extended shafts, right or left hand.

Complete specifications and prices on request. Please give approximate hp. range, input speeds, ratio and approximate quantities which would be required.

CONE-DRIVE GEARS
Division, Michigan Tool Company
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS
7171 E. McNichols Road • Detroit 13, Michigan

▲ For more details circle NED-4140 on enclosed inquiry slip ▲

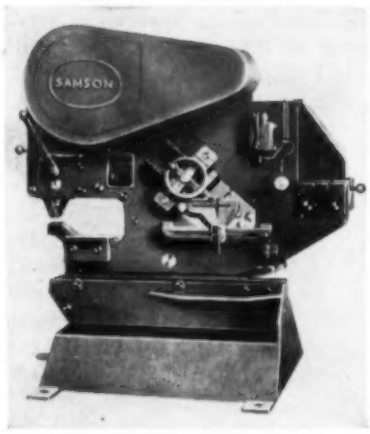
SPRAY DECORATING MACHINE for small plastic and metal parts

By use of different interchangeable electro-formed masks (*See NED Nov. '49*) and resetting of gun angles, variety of parts can be spray painted at speeds of from 700 to 3600 pieces per hour by this air-operated decorating machine. Spray painting is from below and against masks so that surplus spray falls away and is exhausted out back of machine. Two-color parts can be painted by use of separate masks. One hand dial regulates amount of paint sprayed. Once machine is set, same amount of paint is sprayed on every part regardless of speed.

Measuring 48 x 36 x 30 in. high, equipment operates on 80-psi minimum air pressure. Eight AGA deVilbiss automatic guns and two 2-gal air-agitated paint pressure tanks with four insert containers are employed. All working parts are automatically oiled. Air regulators, filter and automatic moisture trap are standard equipment. Conveyor belts which move across table top of machine in synchronization with loading cycle are available. Made by **Conforming Matrix Corp.**, 338 Toledo Factories Bldg., Toledo 2, O.

▲ For more details circle NED-4141 on enclosed inquiry slip ▲

METALWORKING MACHINE punches, shears, cuts and notches

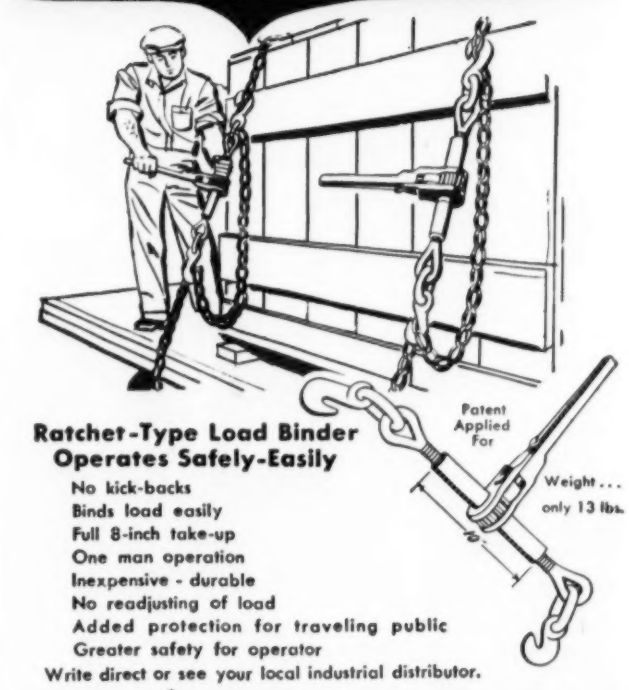


Variety of metalworking operations is handled by Samson size No. 10 Universal Fabricator. Punch handles webs and flanges of beams, channels and columns as well as angles and flat stock. Shear cuts plates of any length or width and trims angles. Bar cutter cuts rounds, squares, angles and tees, later either straight or on miter up to 45 degrees. Coper notches 90-degree V on angles and tees and copes structural shapes and plate.

Standard equipment includes two interchangeable die blocks which enable punch to handle wide range of shapes, one-shot centralized lubrication system and safety guards. Other features are swing-away punch stripper, quickly-adjustable bar cutter, stripper and hold-down, and rollers imbedded in shear table. Twin clutch allows shear end to be operated independently of punch end. Made by **Julius Blum & Co.**, 536-540 W. 22nd St., New York 11, N. Y.

▲ For more details circle NED-4142 on enclosed inquiry slip ▲

A NEW Standard for LOAD-BINDERS



Ratchet-Type Load Binder Operates Safely-Easily

No kick-backs
Binds load easily
Full 8-inch take-up
One man operation
Inexpensive - durable
No readjusting of load
Added protection for traveling public
Greater safety for operator

Write direct or see your local industrial distributor.

American FORGE AND MANUFACTURING CO.
812D Shore Avenue • Pittsburgh 12, Pa.

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Engraving

Here is the most versatile machine...So simple to operate by unskilled labor.

PROFILING VERTICAL MILLING

NEW HERMES Engravograph

This heavy duty bench type model covers a larger engraving area than any other machine of its kind.

NEW HERMES, Inc.
Dept. #26 13-19 UNIVERSITY PL. • NEW YORK 3
World's Largest Manufacturer of Portable Engraving Machines

▲ For more details circle NED-4144 on enclosed inquiry slip ▲

At the Crompton & Knowles Looms Works
WORCESTER, MASS.

Every drawing is reproduced on KODAGRAPH AUTOPOSITIVE PAPER

HERE'S WHY: Crompton & Knowles, world's largest manufacturer of specialty looms, considered the dollars invested in its engineering drawings. Then they considered Kodagraph Autopositive Paper . . . its low price . . . the fact that it produces positive photographic intermediates *directly*. They realized that by using "Autopositives" as their blueprint masters they could protect their drawings . . . cut redrafting costs. And, at the same time, simplify their filing system.

200,000 detail drawings—4 to 8 drawings per sheet of paper—were in their files. These were reproduced on "Autopositive." Then the prints were cut, and filed in sequence—an impossibility before. In addition to increasing protection, this move made possible faster reference . . . reduced blueprint paper waste.

All new drawings are also reproduced on "Autopositive." The company's blueprint machine is used for the exposure operation, standard photographic solutions for development. *No negative step, no darkroom handling!*

Blueprint production is easier, too, they find. Their "Autopositives" have an evenly translucent high-quality paper base and dense photographic black lines, which will not smudge or lose opacity. Result—sharper, cleaner blueprints are produced at uniform, practical machine speeds.

Kodagraph Autopositive Paper
"THE BIG NEW PLUS" in engineering drawing reproduction

Write today for new, free booklet telling all about Kodagraph Autopositive Paper, which you, or your local blueprinter, can process conveniently, economically.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

▲ For more details circle NED-4145 on enclosed inquiry slip ▲

REDUCE HANDLING
of Tools, Parts and Materials

STACKBINS are individual hopper-fronted stacking bins, designed for storage, transportation, assembly.

STACKRACKS are individual units which lock together to form racks of any size, shape or capacity. Stackbins slide like drawers in individual Stackracks

Because Stackbins are portable containers—not fixtures—tools, parts and materials can be carried to departments, from machine to machine, or held in stockrooms without being transferred from one container to another. Stored in Stackracks, any Stackbin is instantly accessible when its contents are needed — without disturbing any other bin.

MOST SIZES IN STOCK

STACKBINS IN STACKRACKS

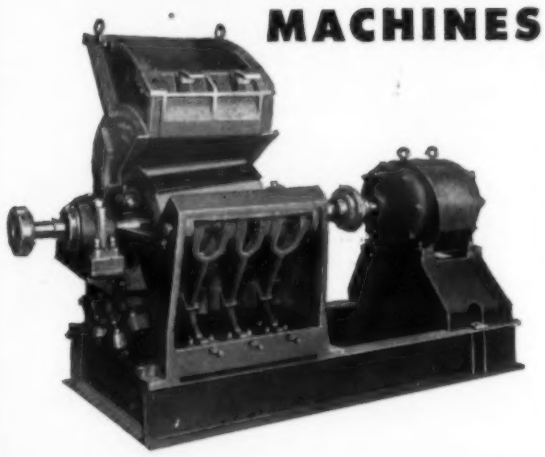
Manufactured and sold in Canada exclusively by Wickware-Stackbin, Ltd., Ottawa

Write Stackbin Corp., 1081 Main St., Pawtucket, R. I.

STACKBIN SYSTEM *"Stacked and Still Accessible"*

For more details circle **NED-4149** on enclosed inquiry slip

M & M REDUCTION MACHINES



These efficient machines will rapidly reduce otherwise unusable waste products to uniform size for easy handling. The product may be used as a fuel for municipal incinerators and power plants. M & M Reduction Machines are the most practical method of garbage disposal. Many applications are being made in industry for turning factory waste into valuable by-products. Cut disposal costs with M & M Reduction Machines. Send us your problems.

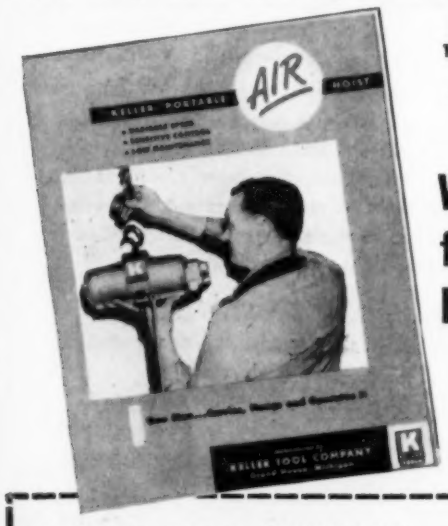
MITTS & MERRILL

1000 SOUTH WATER STREET • SAGINAW, MICHIGAN

For more details circle **NED-4150** on enclosed inquiry slip

EASILY PORTABLE *air* HOIST

For low cost lifting and lowering



300 • 500
1000 • 2000
POUND CAPACITIES

Write for this Folder

KELLER TOOL COMPANY
GRAND HAVEN, MICHIGAN

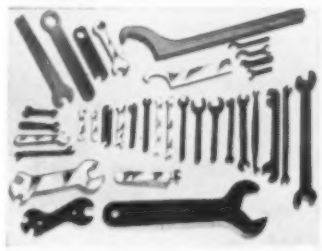
COMPANY _____

STREET _____

CITY _____ STATE _____

For more details circle **NED-4151** on enclosed inquiry slip

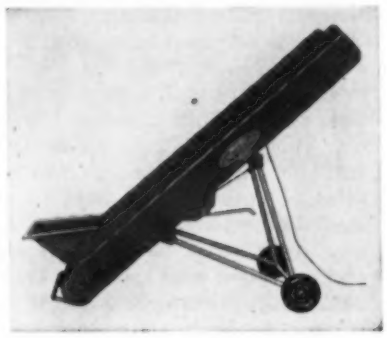
STAMPED WRENCHES
can be made up to 1/8-in. thick



Open end, box, spanner and special types of wrenches up to 1/8-in. thick can be produced to order for particular applications. Made to purchaser's specifications, wrenches can be heat treated, case hardened or cyanided as required and plated if desired. Made by **Federal Tool & Mfg. Co.,** Dept. NED, 3600 Alabama Ave., Minneapolis 16, Minn.

For more details circle **NED-4152** on enclosed inquiry slip

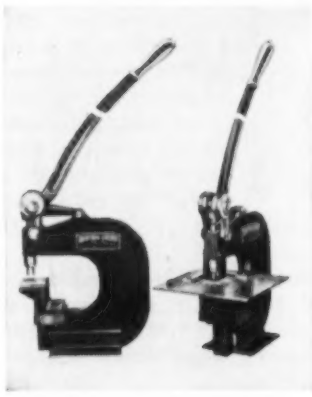
PORTABLE BELT CONVEYOR
available in lengths up to 24 ft



Especially suited for parts removal in punch press operation, model 408-U industrial conveyor has channel length of 8 ft and is equipped with 6-in. side panels. Other models can be obtained in lengths of 4-ft graduations up to 24 ft. Standard units have frame width of 15 in. and belt width of 12 in. Spacing of cleats is 18 in. from center to center, and belt is four-ply 32-oz canvas unless otherwise specified. Conveyor is powered by split-phase 110-v ac motor totally enclosed within channel and which drives belt at standard speed of 74 fpm. Speed can be changed by adjusting combination of roller chain sprockets. Made by **Industrial Engineering & Mfg. Co.,** 501 Bliss St., Brimfield, Ind.

For more details circle **NED-4153** on enclosed inquiry slip

BENCH PUNCH
throat measures 7 x 5 in.



Relatively high and deep throat of this No. 18 Whitney-Jensen bench punch permits it to be used for wide variety of applications including punching holes close to web of angle. Work latitude is further increased through utilization of removable and adjustable die shoe that allows use of close-fitting punches and dies. Work table can be obtained that measures 10 x 10 in. and has 1/4 x 20 tapped holes for locating side and back gage bars. Maximum capacity of tool is 13/16-in. round hole through 12-gage mild steel. Made by **Whitney Metal Tool Co.,** 400 Forbes St., Rockford, Ill.

For more details circle **NED-4154** on enclosed inquiry slip

Popular with *Everybody!*

Changeable Letter Bulletin Board
The message you want—when you want it!

DAV-SON INDUSTRIAL BULLETIN BOARDS

Employee bulletins, safety messages, production records all get maximum attention when you use DAV-SON Bulletin Boards. There is a DAV-SON Bulletin Board for every purpose.

- Changeable Letter Boards
- Cork Back Pin-Up Boards
- Indoor and Outdoor Types
- Metal or Hardwood Frames
- With or Without Locking Glass Doors
- Illuminated and Non-Illuminated
- Special Safety Displays
- Single and Multiple Panels

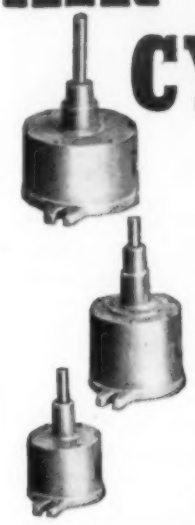
Cork Back Boards. For letters, photos, posters, etc.

Write for complete information regarding your requirements.

A.C. DAVENPORT & SON, INC.
ESTABLISHED 1932
311 N. DESPLAINES ST., CHICAGO 6, ILL.
MANUFACTURERS OF BULLETIN BOARDS FOR EVERY NEED

For more details circle **NED-4155** on enclosed inquiry slip

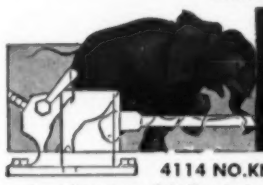
SINGLE-ACTING AIR CYLINDERS



Bore	Strokes - Horizontal	Strokes - Vertical
1"	5/8"	5/8"
2 1/4"	1" 2" 3"	1" 2"
3"		1 1/2" 2"
4"	2" 2 1/2"	2"
5"	3"	3"
6"	3"	2"

NEW CATALOG READY!

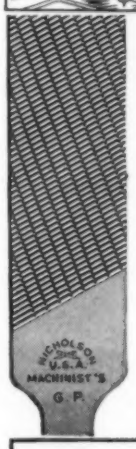
Complete line of simple, adaptable, compact spring-return air cylinders. Cut costs and speed up production the *modern,* Air Power Way. Write today.



MEAD SPECIALTIES COMPANY

4114 NO. KNOX AVE., DEPT. N-60-A, CHICAGO 41, ILL.

For more details circle **NED-4156** on enclosed inquiry slip



THE uses of the new Nicholson Machinist's General Purpose File *can* be carried too far — as portrayed in the scene by "Pop" the shop foreman and "Greasy Pants" the shop dimwit.

The G.P. isn't even intended to supplant regular or special purpose files designed to do some single type of job in the best manner or shortest time. But to the mechanic working variously on aluminum, brass, cast and malleable irons, mild or annealed tool steels, its ranginess makes it a work speeder on hundreds of fabricating and machine-shop jobs.

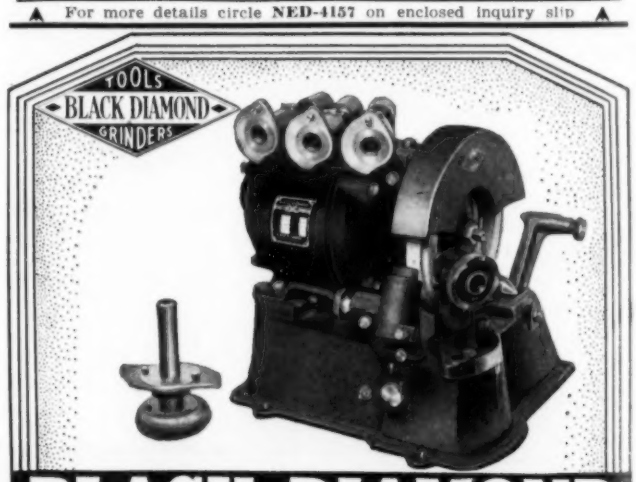
The Machinist's G.P. embodies the principles of the Mill (single-cut) and the Flat (double-cut) files . . . combines them to give both *fast metal removal* and *smooth finish.*

See your industrial distributor. Meantime, write us for TECHNICAL BULLETIN, "10 SPECIAL FILE TYPES," containing further details about the G.P.

NICHOLSON FILE CO., 34 Acorn St., Providence 1, R. I.
(In Canada, Port Hope, Ont.)

NICHOLSON *A FILE FOR EVERY PURPOSE*

For more details circle **NED-4157** on enclosed inquiry slip



BLACK DIAMOND
PRECISION DRILL GRINDER

ANY BLACK DIAMOND OWNER WILL TELL YOU THERE'S NO GRINDER EVEN COMPARABLE— FOR SHARPENING SMALL DRILLS

Black Diamond Grinders cut 50% and more on drill sharpening and drilling costs. They sharpen small drills so efficiently and accurately that drill breakage and work spoilage are reduced to an absolute minimum.

Anyone can operate a Black Diamond Grinder, can keep all small drills sharp—and true centered with smooth lips accurately ground to the same length, correct angle and clearance for fast, precision drilling.

The built-in Diamond Point Dresser, is instantly available to keep the grinding wheel sharp cutting and the Web Thinning Attachment cares for all types of Notched Points.

If you use small drills, singly or in gangs, this moderately priced grinder will keep any quantity sharp, ready for use. You should own a Black Diamond. Write for New Bulletin.

BLACK DIAMOND SAW & MACHINE WORKS, INC.
NATICK, MASSACHUSETTS

For more details circle **NED-4158** on enclosed inquiry slip

Choose THE BEST PUMP FOR YOUR JOB

WHICHEVER TYPE you select be sure to call on the assistance of a qualified pump engineer. He has the experience that will help you get lowest cost operation in the long run. You can put this kind of experience to work for *you* by calling in your Allis-Chalmers pump engineer. Wide selection, prompt delivery. Bulletin 65B6059 describes full line. A-3053

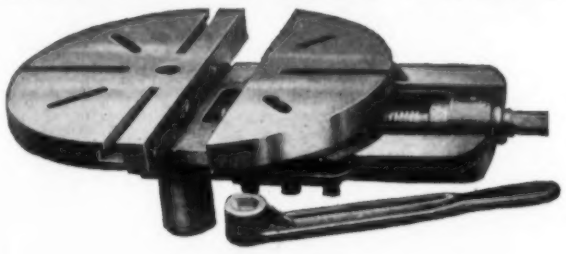
ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

For more details circle **NED-4159** on enclosed inquiry slip

Try the MODERN

SAFETY DRILL TABLE



For Faster, SAFER Work in Your Maintenance Department

Combines a drill table, a vise, a set of parallels and V block. No more lost fingers from hand held jobs that slip. No more 30 minute set-ups for a 1 minute drilling operation. Made in 6 sizes from 8" to 28" dia. We guarantee each Safety Drill Table will save its cost on labor alone in 6 months, to say nothing of plant down time when vital maintenance is delayed even a few minutes.

FREE TRIAL OFFER

WRITE FOR FREE FOLDER

Shows many typical set-ups and use on radial drills. Complete specifications on all models. Covers MONEY BACK GUARANTEE and 30 DAY FREE TRIAL OFFER.

MODERN MACHINE TOOL CO.
Jackson, Michigan

For more details circle **NED-4160** on enclosed inquiry slip

** Fluid Power Improves Production*

"LOGAN" AIR AND HYDRAULIC POWER-OPERATED CHUCKS

...WITH OPEN OR CLOSED CENTER

32 years' engineering know-how • Completely equipped plant • Satisfaction assured • Complete range of standard types • Extra factors of strength and durability • Accurate, dependable service.

For your complete air and hydraulic chucking systems, Logan offers an extensive line of rotating cylinders, control valves, accessories, hydraulic power units and Collet Grip tube fittings.

* **ENGINEERING SERVICE**

Our engineers will solve your chucking problems with Logan special chucks, mandrels and collet chucks. No obligation.

FREE CATALOGS

Write for Catalog No. 70, Section 1, on Logan Air and Hydraulic-operated Chucks; Catalog No. 100, Section 4, on Air Valves; Catalog No. 91 on Air Cylinders.

Logan SAVES TIME EFFORT MOTION
Air and Hydraulic Equipment
LOGANSPORT MACHINE CO., INC. 806 Center Ave. Logansport, Ind.

FLUID POWER SPECIALISTS SINCE 1916

For more details circle **NED-4161** on enclosed inquiry slip

PLATFORM HOIST
can be raised or lowered 25 fpm

Painting, repairs and inspection of elevated work are facilitated by foot-operated Bosun's Chair one-man platform hoist. It consists of rigid tubular steel cage which is moved by means of winch. Sitting on bicycle type saddle, worker operates pedals to raise or lower hoist. It is also possible to work from standing position.

Unit has rated capacity of 625 lb, weighs 75 lb, and can be rigged quickly for work in any location. Cables are arranged so that cage will always hang in upright position, and two hard rubber rollers on front prevent marring of working surfaces. Incorporating three automatic mechanical safety devices, unit is approved by Underwriters' Laboratories. Made by **Safway Steel Products, Inc.**, 6224 W. State St., Milwaukee 13, Wis.

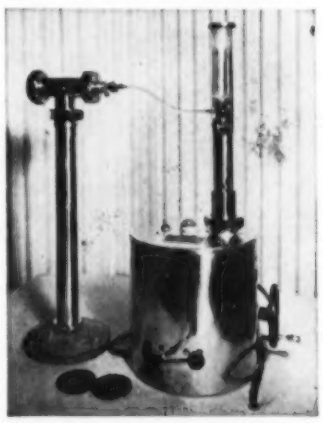
For more details circle **NED-4162** on enclosed inquiry slip

BRUSH HOLDER
for fractional horsepower motors

Flush-molded of Bakelite, cartridge type brush holder is constructed for attachment to fractional horsepower universal motors. It measures 1-13/16 in. long and 0.48-in. OD. Made by **Electrical Mfg. Co.**, Racine, Wis.

For more details circle **NED-4163** on enclosed inquiry slip

CATALYST TESTING PUMP
injects precise amounts of charge



Designed to inject smooth uninterrupted flow through capillary tube and injection needle, Micro-Feeder catalyst testing charge pump has 100-cu cm capacity and feeding rate as low as 1 cu cm per hour. Either change gears or variable speed drives are available to provide constant rate of flow proportional feeding. Signal light and four-figure totalizer are included. Four ¼-in. female pipe tap ports are provided for feed lines and gages, and vent screw is furnished in top of manifold block. Maximum output pressure of standard pump is 500 psig. Recommended applications for this unit include petroleum laboratory use for oil charge or water injection and continuous feed of additive to main stream. Made by **Proportioneers, Inc.**, 137 Codding St., Providence 1, R. I.

For more details circle **NED-4164** on enclosed inquiry slip

INVINCIBLE
Vacuum Units Reclaim:

bolts broken glass chemicals coffee cork crushed stone dirt explosives fabricated parts fertilizer flour fly ash fly lint frit gold grindings lead liquids nuts paper dust plastics oils ravelings sand sawdust silica dust soap shot soapstone spices sugar talc and MANY MORE.

Model 809-B—5HP

★ *By recovering or reclaiming almost anything that will pass through a vacuum hose, Invincibles quickly repay their costs . . .* Invincibles also serve as vacuum cleaners, keeping plants clean, safe and more productive by removing all industrial dust and dirt . . . Over 100,000 units are in use—5,000 for over 25 years . . . Ask for FREE BOOKLET illustrating uses of Invincible Vacuum Units.

INVINCIBLE VACUUM CLEANER MFG. CO.
DOVER, OHIO

For more details circle **NED-4165** on enclosed inquiry slip

FUMES • • HEAT DON'T BOTHER LINK-BELT OVERHEAD CONVEYOR TROLLEY

Severe service conditions are being met constantly by Link-Belt Conveyor Trolleys, in galvanizing, plating and painting processes and in many other operations where heat, fumes and vapors are present.

With ball bearing wheels, free from cages and adequately lubricated and sealed, drop-forged brackets for higher load rating, operation is smooth, quiet, and requires minimum maintenance. Trolleys can be assembled to conveyor chain while in operating position. Low initial cost and extremely long life expectancy.

11,810 *Send for Folder No. 2241-B.*

LINK-BELT COMPANY
Chicago 8, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices, Factory Branch Stores and Distributors in Principal Cities.

For more details circle **NED-4166** on enclosed inquiry slip

*Save up to 40% on melting metals**

****KEMP...***

Immersion Pots Melt Metal under Ideal Conditions—Control Degree, Rate and Distribution of Heat, Limit Dross Formation

NO MATTER WHAT soft metals you heat: lead, pewter, tin or salt—for coating, annealing, tempering or a special application—your plant needs Kemp Immersion Heating! Take *heat recovery* as an index. A full *12 ton* Kemp pot, out of service *two days*, can be brought to 600° F. in *less than two hours!*

PAYS FOR ITSELF

Even if your melting equipment is large enough for the job . . . when you replace with Kemp you're money ahead. No brickwork to steal heat . . . no external combustion chamber . . . no carbon monoxide . . . no temperature overrun. You get *high melting rates*, reduced dross formation, speed of temperature recovery after adding cold material . . . PLUS *an estimated fuel saving of up to 40%!*

FOOLPROOF OPERATION

The famous Kemp Carburetor, part of each installation, assures complete combustion, reduces installation costs, makes your melting operation profitable. Find out how you can save. Send coupon today.

KEMP *Immersion Melting Pots*
OF BALTIMORE

CARBURETORS
BURNERS
FIRE CHECKS
ATMOSPHERE & INERT GAS GENERATORS
ADSORPTIVE DRYERS
METAL MELTING UNITS
SINGEING EQUIPMENT
SPECIAL EQUIPMENT

THE C. M. KEMP MFG. CO., Dept. B-6, 405 E. Oliver St., Baltimore 2, Md.
Gentlemen: Send me Information Bulletin IE-11.

Name .....
Company .....
Address .....
City ..... Zone ..... State .....

For more details circle **NED-4167** on enclosed inquiry slip

PIPE AND BOLT THREADERS

New Line! 4 Models! 4 Choices!

No. 782 PIPE THREADER
Stationary Die-Head
PIPE range ¼" to 2"
BOLT range ¼" to 1½"

No. 782-R PIPE THREADER
Revolving Die-Head
(Manually Operated) and Open-Type Vise Same range as No. 782 model.

No. 781-A BOLT THREADER
Automatic Revolving Die-Head
and Open-Type Vise
BOLT range ¼" to 1½"
PIPE range ¼" to 1¼"

No. 782-A BOLT THREADER
Automatic Revolving Die-Head
and Open-Type Vise
BOLT range ¼" to 1½"
PIPE range ¼" to 2"

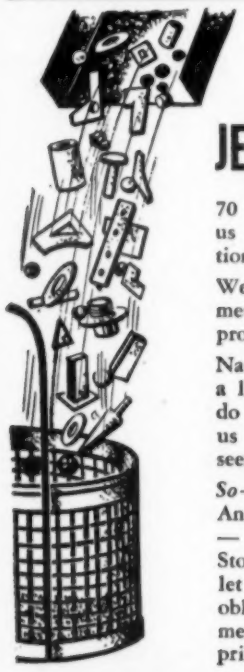
The "RAPIDUCTION JR." Line

Basic features of these machines are the same. They differ chiefly in the type of Die-Heads and Work Holders.

Each "RAPIDUCTION JR." model is designed for a PRIMARY purpose. When YOUR exact needs are known, it's EASY to select the BEST machine to fit the job. Write us for complete details.

OSTER **THE OSTER MFG. COMPANY**
2066 E. 61st St., Cleveland 3, Ohio, U.S.A.

For more details circle **NED-4168** on enclosed inquiry slip



WHEN YOU PUT A LOT OF LITTLE ONES INTO A BIG ONE — MAKE SURE IT'S A

JELLIFF DIPPING BASKET

70 years making Wire Mesh have taught us a lot about this material, its fabrication, and uses.

We make Dipping Baskets of any ductile metal, and in any size and shape your products and process require . . .

Naturally we believe we make them just a little bit better than the other fellows do — and a lot of people who turn to us regularly for their Dipping Baskets seem to agree with us.

So—for Degreasing—Pickling—Plating Anodizing — Washing — Heat Treating — or for just plain Bulk Handling or Storage of small parts in large quantities, let JELLIFF give you a no-cost no-obligation estimate for your next requirement of Dipping Baskets. Send a blueprint or specifications to Department 11.

THE C. O. **JELLIFF** MFG. CORP.
DIPPING BASKETS · LEKTROMESH · RESISTANCE WIRE · WIRE MESH PARTS · WIRE CLOTH · STRAINERS • FILTERS
SOUTHPORT CONNECTICUT
WIRE PRODUCTS SINCE 1860

For more details circle **NED-4169** on enclosed inquiry slip

NEW MODEL • NEW FEATURES . . . Sensational LOW PRICE!

FOREDOM FLEXIBLE SHAFT MACHINE No.9050

ONLY $27.95 Complete with FOOT RHEOSTAT and *Quick-Detachable* PENCIL-SIZE HANDPIECE

Quality Tested Since 1922

On the bench, mounted under the bench or hung up. 1/15 H. P. high speed air-cooled universal motor, amply powerful FOR EVERY "small-work" job of grinding, finishing, de-burring, etc. Also available with ball-bearing handpieces—pencil size or larger—at proportionately low prices.

Order one now. Catalog 5230, on request.

FOREDOM ELECTRIC CO., Dept. 5230
27 Park Place, New York 7, N. Y.

Send your catalog No. 5230, showing different uses of Foredom Flexible Shaft Machines.

NAME .....
ADDRESS .....
CITY & ZONE .....
STATE .....

For more details circle **NED-4170** on enclosed inquiry slip

HIGH FREQUENCY ALTERNATOR provides 400 to 800-cycle ac

Capable of supplying power at stated frequency range from 5.5 to 230-v dc input, this high frequency inductor alternator is recommended for applications where small mobile source of 100-w or less continuous ac power is desired. Output is obtained from rotary inductor that eliminates conventional slip rings and brushes, and alternating current rotor and field are electrically isolated from direct current motor end. Output is not affected by influence of magnetic fields, vibration or aging. Made by **Carter Motor Co.**, 2660 N. Maplewood Ave., Chicago 47, Ill.

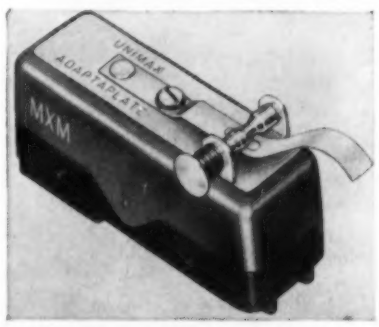
For more details circle **NED-4171** on enclosed inquiry slip

VACUUM CHUCK holds workpiece with 1400-lb force

Atmospheric pressure is utilized by this vacuum chuck to hold brass, aluminum, copper, plastic, glass and other flat parts. It is designed to produce rated holding force when exhausted to 23 in. of mercury but will operate on 15 in. of vacuum. Compensation for leakage around workpiece is afforded by normal capacity of vacuum pump. Made by **O. S. Walker Co.**, 7-11 Rockdale St., Worcester 6, Mass.

For more details circle **NED-4172** on enclosed inquiry slip

SAFETY INTERLOCK cuts off power circuit automatically



Electric circuit can be reclosed manually for testing with no danger of being found 'hot' later when safety interlock for high-voltage equipment is used. Device is provided on Adaptaplate for operation with standard Unimax snap-acting switches. Conventional leaf-type actuator opens switch contacts when door or access panel of protected enclosure is opened as little as ⅛-in. Pushbutton operated slide cam is mounted above leaf actuator so that interlock circuit is reclosed when 'cheater' button is pushed. Detent in slide cam engages leaf actuator to keep switch contacts closed while circuit is being worked on. Switch is restored to safety position manually or automatically when door is closed. Made by **W. L. Maxson Corp.**, Unimax Switch Div., Room 1510, 460 W. 34th St., New York 1, N. Y.

For more details circle **NED-4173** on enclosed inquiry slip

YOU JOCKEY BIG SKID LOADS IN A JIFFY

WITH *Single Stroke* *

"Weld-Bilt" MECHANICAL LIFT TRUCKS

One quick stroke of the handle under a skid load, and you're ready for action—with this new Single Stroke MECHANICAL LIFT TRUCK. It's easier to maneuver, too, with full 360° swivel, 270° lifting angle. Handle Safety Spring keeps handle in safe vertical position. Has Automatic "Anti-Kick-Back" Handle Release; smooth, full-hydraulic lowering; Front Wheel Equalizer to keep load level. Write for complete details TODAY.

WEST BEND EQUIPMENT CORPORATION
MATERIALS HANDLING ENGINEERS
311 Water Street, West Bend, Wis.

For more details circle **NED-4174** on enclosed inquiry slip

FOR PROOF BEYOND COMPARE

Send for

RUBYFLUID

Soldering Flux

Special Offer

For $1 Ruby will send you one pint of liquid and one half pound of paste soldering flux.

Try it! See for yourself the amazingly stronger, smoother and longer lasting unions you get when you use Rubyfluid.

Rubyfluid
Wets out freely . . .
Has no harmful fumes . . .
Acts quickly and saves time . . .

In addition Ruby will send you Free a new booklet on "How to Solder."

SEND YOUR $1 TODAY TO—

Ruby Chemical Co.
72 McDowell St.
Columbus, Ohio

Rubyfluid

For more details circle **NED-4175** on enclosed inquiry slip

HANNIFIN AIR PRESSES

1. Minimum Investment!
2. Less Effort!
3. More Output!

59 Models—1/2 Ton to 18 Tons

FOR fast, efficient, low cost production with a minimum investment in equipment, Hannifin Air Operated Presses can't be beat for countless pressing, broaching, molding, staking, marking, bending, punching, forming, oil grooving, riveting, keyway cutting, and assembly operations.

HIGH SPEED, EFFICIENT—Effortless speed through new instant-acting valves. Use ordinary shop air supply.

EVERY WORK CONVENIENCE—Finest Hannifin engineering and construction. *Send for descriptive bulletins.* HANNIFIN CORPORATION, 1127 So. Kilbourn Ave., Chicago 24, Illinois.

HANNIFIN
Air Operated Presses

For more details circle **NED-4176** on enclosed inquiry slip

FOTO-FLO MODEL C PHOTO-COPYING MACHINE

New! Speedier! More Economical!

DAYLIGHT OPERATION NO DARKROOM REQUIRED

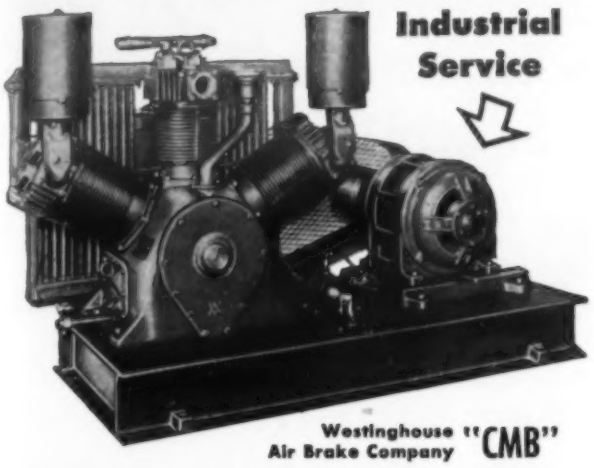
Makes Up to 5 (18" x 24") Prints a Minute of anything written, printed, drawn or photographed

WRITE DEPT. 50-107 for information showing how FOTO-FLO can speed production and lower photo-copying costs.

HALOID THE HALOID COMPANY
ROCHESTER 3, NEW YORK
Branch Offices in Principal Cities
Photocopy Papers • Photo-copying Machines • Photographic Papers

For more details circle **NED-4177** on enclosed inquiry slip

Here's a Husky "He-Man" AIR COMPRESSOR for Industrial Service



Westinghouse Air Brake Company "CMB"

Handles tough assignments—designed for continuous operation at 150-lb. max. Two low-pressure, one high-pressure cylinders, forced-feed lubrication system with "metered" oil flow. Automatic—may be arranged for "start and stop" or "continuous-running—load-unload" operation. Displacements 126 to 203 C.F.M., Motor HP 20 to 40. Catalog 9302-7; ask for it.

Westinghouse Air Brake Co.

Industrial Division: Wilmerding, Pa.

DISTRIBUTORS THROUGHOUT THE UNITED STATES
CONSULT YOUR CLASSIFIED DIRECTORY

For more details circle NED-4178 on enclosed inquiry slip

Built-in OPERATING ASSURANCE

FOR BUILDERS OF ELECTRIFIED EQUIPMENT!

Nowhere does WESTON *dependability* and *value* pay bigger returns than on the panels or controls of electrical equipment. By consistently *telling the truth,* they help assure efficient performance of the equipment in users' hands . . . where *so much* depends on instrument performance. Moreover, the name WESTON on a panel instrument gains instant recognition . . . helps build buyer acceptance for the products on which they are installed. Available in types, sizes, ranges and styles for all needs. Ask your nearest WESTON representative for all the facts, or write for bulletin A-7-B. WESTON Electrical Instrument Corporation, 663 Frelinghuysen Avenue, Newark 5, New Jersey.

WESTON *Panel Instruments*

For more details circle NED-4179 on enclosed inquiry slip

ROTARY CARD FILE compact unit holds 1000 cards

Since rectangular base telephone can be placed in tubular stand incorporated in Phone Base rotary card file, unit requires no extra desk top space and is convenient for telephone use. File carries cards in looseleaf arrangement. They are slotted or punched and can be slipped on or off at will. Supplied with 1000 cards and celluloid covered alphabetic index, file is priced at $19.50. Made by **Wheeldex Mfg. Co.,** 41 Bank St., White Plains, N. Y.

For more details circle NED-4180 on enclosed inquiry slip

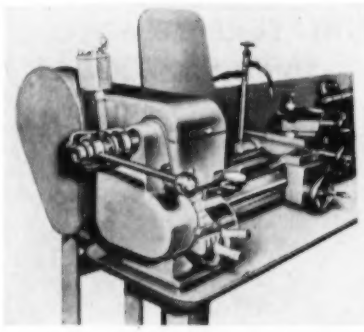
PNEUMATIC DIE GRINDERS are short heavy-duty types

Recommended for grinding dies, cleaning castings, deburring and cleaning welds, models M-612 and M-613 heavy-duty air-powered grinders can be used with carbide and high speed rotary files as well as with various abrasive points and wheels.

Model M-612 has 1-in. spindle projection threaded ⅜-in.-24, weighs 3 lb 6 oz, is 9 13/16 in. long and can be fitted with ⅛ or ¼-in. collet. Model M-613 has 7/16-in. spindle projection, weighs 3 lb 4 oz, measures 9¼-in. long and is generally used with ⅛ and ¼-in. collets. Tools have no-load speeds of 20,000 and 17,000 rpm, respectively. Made by **Master Pneumatic Tool Co.,** Peneman Rd., Orwell, O.

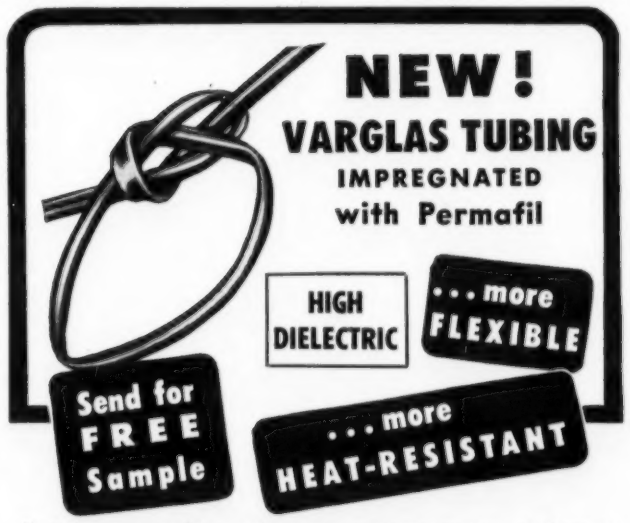
For more details circle NED-4181 on enclosed inquiry slip

LATHE COLLET ATTACHMENT is quick opening production type



Developed for use in conjunction with 1⅜-in. hole - in - spindle lathes, this Waltco quick opening and closing collet attachment has 1-in. capacity. Cam spool and fingers are designed to provide vise-like grip with minimum pressure on actuating lever, and component parts are made of heat treated alloy steel for strength and long life. Adjusting mechanism is built inside outer diameter leaving no protruding knobs to catch clothing; and attachment is designed so that at all spindle speeds, stock will be free in open position. Among lathes which this attachment will fit are 11-in. Logan, South Bend, Clausing and Sheldon. Made by **Bell Equipment Co.,** Dept. NED-10, 5212 Santa Fe Ave., Los Angeles 58, Calif.

For more details circle NED-4182 on enclosed inquiry slip



NEW! VARGLAS TUBING IMPREGNATED with Permafil

HIGH DIELECTRIC

. . . more FLEXIBLE

Send for FREE Sample

. . . more HEAT-RESISTANT

Here is a new tubing with a new synthetic coating of General Electric Permafil on Fiberglas braid that is . . .

So FLEXIBLE that it can be twisted, bent, wrapped, tied in knots . . . without cracking or peeling.

So TOUGH that severe use will not destroy its dielectric property.

So HEAT-RESISTANT that it will withstand high temperatures and can be after-treated in baking and varnishing operations.

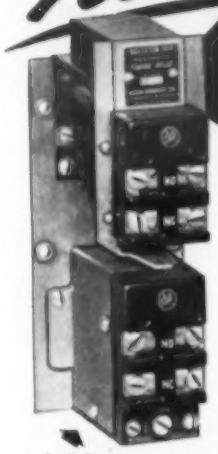
Varglas Permafil is made in standard colors, in a wide range of sizes. *It is available in coils*—so that you can cut the exact lengths you need, without waste.

And . . . it is a premium tubing at a reasonable price. Write today for free sample and full information.

VARFLEX CORPORATION
310 N. Jay St. Rome, N. Y.

For more details circle NED-4183 on enclosed inquiry slip

New... BULLETIN 849 PNEUMATIC TIMING RELAY



A-C Timer with Auxiliary Contacts
D-C Timer

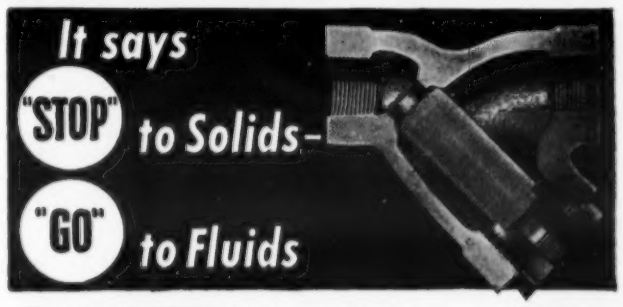
Good for Millions of Operations

- For "dash up" or "dash down" operation
- Available for NEMA Type 1, 4, 7, and 9 applications

This new, compact, solenoid type, pneumatic timing relay utilizes a synthetic rubber bellows for controlling the tripping time. Has a range of from 10 cycles to 3 minutes, and an accuracy of approximately 10%. Its setting is easily adjustable over a wide range, and the relay resets instantaneously. This timer will provide satisfactory operation irrespective of temperature, humidity, or vibration conditions. Write for information. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wis.

ALLEN-BRADLEY QUALITY MOTOR CONTROL

For more details circle NED-4184 on enclosed inquiry slip



Here is a BETTER Strainer to "police your pipelines"

- **FIRST—*The Screen,* a high-grade, woven Monel wire basket that catches solids—lets condensate, oil or other fluids flow freely.**
- **SECOND—*Finish.* Cadmium plated for protection against corrosion and for better appearance.**
- **THIRD—*Easily Cleaned.* Blow-off bushing made for easy removal. Bushing and Screen come out together. Screen automatically aligns on reassembly.**

- **THOUSANDS IN SERVICE—Sold by over 150 Mill Supply Houses. 6 sizes from ½" to 2" for pressures up to 600 lb. Reasonably priced.**

See your supply house or write for Bulletin S-201.

YARNALL-WARING COMPANY
131 Mermaid Ave., PHILADELPHIA 18, PA.

YARWAY STRAINERS

For more details circle NED-4185 on enclosed inquiry slip

FOR ESSENTIAL PROTECTION

Time-tested, resilient Wirebounds combine the strength of steel with thinner wood. Thickness of boards, arrangement of reinforcing battens, style of cleats, and number and gauge of wires vary with the type and weight of product carried. See below*

USE **Wirebound BOXES & CRATES** FOR LOWER TOTAL SHIPPING COSTS

60 Wirebound Plants throughout the United States

*Send for free book . . . contains complete details of Wirebound advantages, technical features and describes how Wirebounds are designed specifically to meet your requirements. Mail coupon today!

Wirebound Box Manufacturers Assn., Room 1828, Borland Bldg., Chicago 3, Ill.
☐ Send Booklet of Product Information ☐ Send a Sales Engineer

NAME
COMPANY ADDRESS
CITY ZONE STATE

For more details circle NED-4186 on enclosed inquiry slip

AN AIR CYLINDER WITH ALL CONTROLS BUILT-IN

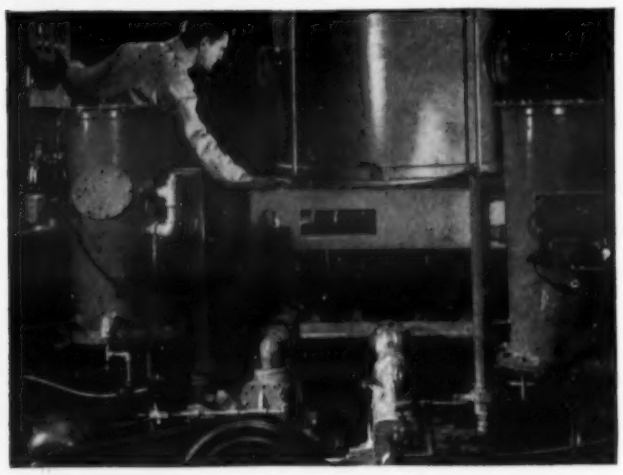
THIS revolutionary air cylinder is a complete power unit in itself. Four-way directional valve, with an operating lever adjustable to work from any angle in any plane, and separate speed controls for advance and retract strokes, are integral with the cylinder itself. This compact "controlled-air-power" unit requires only one air connection which can be flexible hose. Available in 1¼", 2½", 3⅝" and 4½" bores. Any stroke length.

Known as the Bellows Air Motor, this modern version of air cylinder power makes air safer, easier and simpler to use. Helps in a hundred ways to get more production at lower cost.

• *Write today for your free copy of the new 16-page bulletin "Putting 'Controlled-Air-Power' to Work." Address The Bellows Co., Dept. NED 650, 222 W. Market St., Akron 9, Ohio.*

The Bellows Co.
Akron 10, Ohio

▲ For more details circle **NED-4188** on enclosed inquiry slip ▲



Watching an Economy Wave

IN PLASTICS COATING

INSIDE the chamber are racks of plastic items being coated with a brilliant metallic surface. The application is vacuum coating. Special lacquers under and over the metallic film insure permanence and gloss.

The equipment is DPi-made. The lacquers are selected with DPi assistance. DPi technical advice made the entire project possible.

The stainless steel bell jar—38 inches in diameter and 42 inches high, shown above in DPi's LC 1-36 Vacuum Coating Unit—is ideal for batch coating. Several manufacturers are using this unit for coating small plastic novelties for the dime store trade. It has proved its practical economy in this field where there is a very small margin per unit of sale.

New applications for vacuum coating are being developed almost daily. It is already a regular, standard production tool, lowering costs for many manufacturers.

Write for your free copy of the DPi booklet, "Vaporized Metal Coatings by High Vacuum." It gives full data for our entire line of coating units, ranging from a simple 10-inch bell jar to a 16-station turntable unit.

DPi HIGH VACUUM RESEARCH AND ENGINEERING

VACUUM EQUIPMENT DEPARTMENT
DISTILLATION PRODUCTS *industries*
763 Ridge Road West, Rochester 3, N. Y.
DIVISION OF EASTMAN KODAK COMPANY

Distillers of Oil-Soluble Vitamins and Other Concentrates for Science and Industry; Manufacturers of High Vacuum Equipment

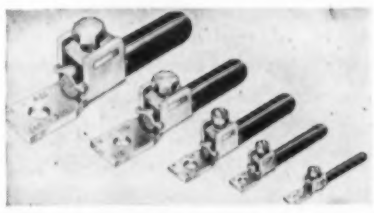
▲ For more details circle **NED-4189** on enclosed inquiry slip ▲

RATCHET ADAPTER
fits all ⅜-in. drive handles

This ⅜-in. model J-8 'junior' Ratch-A-Daptor fits all ⅜-in. drive handles and sockets and features simple ring shift for converting to right or left drive. It makes ratchet extension when attached to T-handle, flexible handle or extension handle. It is sealed to keep out dirt and grit and has 20 teeth for secure grip at any position. Tool is 1⅛ in. wide and weighs 5½ oz. Made by **Bingham-Herbrand Corp.**, Herbrand Div., Fremont, O.

▲ For more details circle **NED-4190** on enclosed inquiry slip ▲

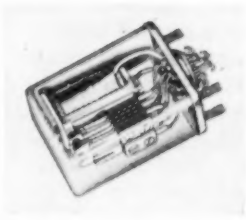
ELECTRIC CONNECTORS
handle wide wire-cable size range



Five lug models comprise Wide Range line of pressure connectors for use with copper, aluminum or steel wire in sizes from No. 14 to 500,000 cir mils. Body of connector conforms to wedged-in conductor to afford large contact area. Self-locking screw provides permanent pressure on contact pad. Underwriters' Laboratories listed, lug is within required temperature rise limits. Tightening bolt, guide nut and contact pad are of steel; and lug body is formed of hard-drawn electrolytic copper which resists corrosion cracking. Entire unit is cadmium plated. Three smaller sizes can be installed with screwdriver and two larger models with wrench. Made by **National Electric Products Corp.**, Thirteenth Floor, Chamber of Commerce Bldg., Pittsburgh 19, Pa.

▲ For more details circle **NED-4191** on enclosed inquiry slip ▲

MINIATURE TELEPHONE RELAY
measures 1 x 1-11/16 x 2-5/32 in.



Designed to require minimum chassis mounting space MT miniature telephone relay assembly is hermetically sealed in steel enclosure. Unhoused relay measures 11/16 x 1½ x 1⅜ in. Enclosure illustrated will accommodate relay with maximum contact stack and can be fitted with all headers except standard octal plug. Unit is available with windings from fraction of ohm to 22,000 ohms for operation up to 230 v ac or dc and can be obtained with dual stack having contact arrangements up to 16 springs with limit of six movable poles. Minimum operating power is 0.050-w per pole which allows sensitivity of 1.5 ma in single-pole relay. Maximum coil power for unenclosed unit is 4 w. Made by **Potter & Brumfield Mfg. Co.**, 270 N. Main St., Princeton, Ind.

▲ For more details circle **NED-4192** on enclosed inquiry slip ▲

MULTIPLE DRILLING with a MULTI-DRILL
INCREASES CAPACITY
UP TO 800%

ADJUSTABLE TO ANY HOLE PATTERN FITS ANY DRILL PRESS

If your production requires drilling from 2 to 8 holes in a work piece, a MULTI-DRILL will cut costs and speed output up to 800%. The MULTI-DRILL is universally adjustable to any hole pattern—is compactly built to permit easy, unhampered operation with drill jigs or other special fixtures. Ruggedly built to take the wear and tear of high production work, the MULTI-DRILL will handle your long and short run multiple drilling jobs with ease and economy. The MULTI-DRILL will drill on hole centers as close as ½"—handle drill sizes up to ⅜" in steel. Special adaptations available.

There is a Commander MULTI-DRILL Distributor in your area. Write for his name, literature and complete details.

COMMANDER MFG. CO.
4220 WEST KINZIE ST. CHICAGO 24, ILL.

Product of *Commander* — Builder of the *Commander Tapper*

▲ For more details circle **NED-4193** on enclosed inquiry slip ▲

Automatic controller *introduces* 5 important features

It took Bristol to give you—in its Series 500 Air-Operated Controller—these exclusive advantages.

1. *Calibrated control actions.* Three quick settings reproduce previously-established actions exactly.
2. *Zero reset rate and zero derivative time.* Facilitate automatic start-up.
3. *Single adjustment returns instrument to "control" operation.*
4. *Gold-plated "free" vane*—made of beryllium copper for strength, gold-plated for long life.
5. *Reset stops.* Ask about this exclusive Bristol feature.

Write for Bulletin A120. THE BRISTOL COMPANY, 112 Bristol Road, Waterbury 20, Conn.

BRISTOL

AUTOMATIC CONTROLLING, RECORDING AND TELEMETERING INSTRUMENTS

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3 *specific handling problems solved at* **OTIS TERMINAL WAREHOUSE** *WITH* **BAKER** *FORK TRUCKS*

This large Cleveland warehouse handles about 17,600,000 lbs. of merchandise per month. Approximately 25% of this tonnage is handled by two Baker FQ (light-weight, low-cost) Fork Trucks—used for unloading, storing and loading—solving three specific handling problems:

1. Smooth operation has materially reduced breakage of fragile merchandise.
2. Electric power has made mechanized handling possible in certain confined areas.
3. Maintenance costs and down time of handling equipment have been substantially reduced.

Efficient use of Fork Trucks has kept operating costs in line. High tiering achieves maximum capacity from storage areas.

Learn how Baker Trucks can solve similar handling problems in your plant or warehouse.

BAKER INDUSTRIAL TRUCK DIVISION
of The Baker-Raulang Company
1245 WEST 80th STREET • CLEVELAND 2, OHIO

Baker INDUSTRIAL TRUCKS

▲ For more details circle **NED-4195** on enclosed inquiry slip ▲

K-P *Spiral Woven Wire* CONVEYOR BELTS

Made in suitable metals and mesh sizes for conveying, material handling, processing and heat treating. Particularly well adapted to the food industries where free circulation of air and drainage are required. K-P Flextrough Belts with flanged edges prevent small parts from rolling off the belt. Side chains provided for sprocket drive. Complete special purpose conveyors designed and manufactured.

KP "Keeps Promises"

KORB-PETTIT
Wire Fabrics & Iron Works Inc.
Engineers and Manufacturers

1501 N. Mascher St.
Philadelphia 22, Pa.

Wire Mesh, Spiral Woven Wire Conveyor Belts, Infra-Red Conveyor Dryers, Leather Finishing and Drying Machines, Industrial Wire Partitions, Machine and Window Guards, Cages, Enclosures, Grilles, etc.

▲ For more details circle **NED-4196** on enclosed inquiry slip ▲

Compare for *results!* Compare for *price!*

and you will choose the GREEN ENGRAVER

only $215*

The Green En-graver offers great speed and convenience.

Quickly cuts up to four lines of letters from 3/64" to 1" on curved or flat surfaces whether made of metal, plastics or wood . . . operates by merely tracing master copy—*anyone* can do an expert job. Special attachments and engineering service available for production work. Just the thing for radio, electronic apparatus and instrument manufacturers. Write today for details.

For *quality* engraving on

• Panels • Scales • Name Plates
• Lenses • Molds • Dials • Instruments

. . . also does routing, profiling and three dimensional modeling.

**Price does not include master type and special work holding fixtures.*

GREEN — GREEN INSTRUMENT CO.
375 Putnam Ave. Cambridge, Mass.

▲ For more details circle **NED-4197** on enclosed inquiry slip ▲

Kester Solder

Kester's famous group of flux-core solders consist of over 100,000 different types and sizes.

Uniform · Efficient

Kester flux-core solders are made only from newly mined grade A tin and virgin lead.

KESTER SOLDER COMPANY
4201 Wrightwood Ave., Chicago 39
Newark, New Jersey
Brantford, Canada

Send for free manual: "SOLDER and Soldering Technique"

KESTER SOLDER

Standard for Industry since 1899

▲ For more details circle **NED-4198** on enclosed inquiry slip ▲

they couldn't afford a SHORT CIRCUIT

PROTECTION IS UNLIMITED with

EC&M VALIMITOR (Volt-Ampere-Limitor) STARTERS

There's no ceiling on VALIMITOR protection. Fault currents are interrupted directly by the well-known Type ZHS heavy-duty Magnetic Contactor used in these starters—the maximum fault current being limited to 25,000 KVA or less (steady state current). No fuses to replace—no calculation of short circuit capability. CUSHIONED STARTING is an inherent plus value.

Write for No. T9-117 BULLETIN REPRINT.

THE ELECTRIC CONTROLLER & MFG. CO.
2698 EAST 79TH STREET • CLEVELAND 4, OHIO

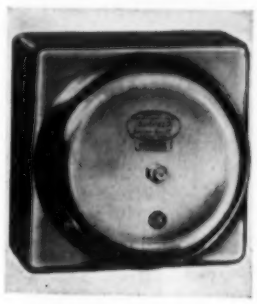
▲ For more details circle **NED-4199** on enclosed inquiry slip ▲

PRECISION SWITCH
has adjustable movement differential

Designed to permit close setting of on-off cycles in control circuits, type MX-1-Z25 snap-acting precision switch gives variable differential motion which can be fixed anywhere within range of 0.0005 to 0.008-in. Switch will compensate for variation in working range tolerances of critical pressure and thermostatic controls and timing devices. Adjustment is made by means of knurled knob on top of switch body that raises or lowers upper contact inside switch. It can be used with any number of actuating means by use of Adaptaplate actuators. Made by **W. L. Maxson Corp.**, Unimax Switch Div., Room 1510, 460 W. 34th St., New York 1, N. Y.

▲ For more details circle **NED-4200** on enclosed inquiry slip ▲

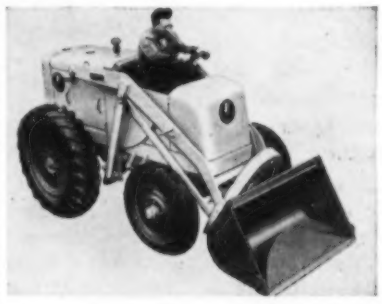
AUTOMATIC FIRE ALARM
is self-contained windup unit



By sounding penetrating 5-minute warning when temperature reaches 135° F, this automatic fire alarm gives instant warning at outbreak of fire. Unit is independent of outside power source, and its rustproof spring driven mechanism stays energized until temperature releases heat-sensitive fuse or until fuse is unscrewed to check alarm. Device can be mounted on ceiling or wall, and other than specified temperature limits are obtainable through use of special heat fuses. Made by **Buffalo Fire Appliance Corp.**, Dept. D, Dayton 1, O.

▲ For more details circle **NED-4201** on enclosed inquiry slip ▲

TRACTOR SHOVEL
bucket capacity is ½-cu yd



In addition to handling bulk materials both inside and outside industrial plants, model HE Payloader tractor shovel will dig, load trucks, remove snow, grade, level, backfill, spread and transport. It has full-reversing transmission with four forward and four fast reverse speeds coupled with forward-reverse control separate from regular gear shift. Ball-bearing steering, hydraulic brakes, comfortable seating and location of operator for full visibility of all operations are features contributing to speed and maneuverability. Dumping clearance is 91 in., and loads can be dumped slowly or abruptly as desired. Made by **Frank G. Hough Co.**, 746-A Sunnyside Ave., Libertyville, Ill.

▲ For more details circle **NED-4202** on enclosed inquiry slip ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES

SPEED SPEED SPEED

INCREASE PRODUCTION
•
PROTECT THE HANDS

IPCO PUNCH PRESS FEEDER

A speed-up tool for lifting, feeding and positioning blanks of metal and other materials in stamping machines and die presses without inserting the hands or fingers within the danger zone . . . Used for separating sheets, transferring from piles or stacks . . . Many other uses on all non-porous materials.

Write for Bulletin L-60

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

▲ For more details circle **NED-4203** on enclosed inquiry slip ▲

New! FAFNIR
Spherical Roller Bearing Pillow Blocks

Two-piece split design housing: High-grade stress relieved cast iron, oil or grease lubrication, held or free bearing mountings, adaptable for oil or water cooling, equipped with either felt seal or frictionless triple labyrinth seals, housings with closed ends when required.

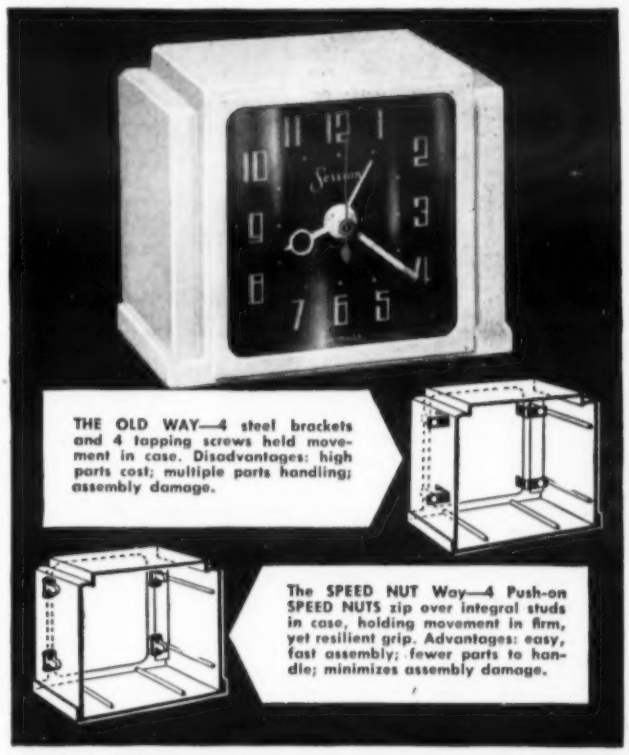
Two types — full range of sizes: Adapter type mountings for shaft diameters from 1 7/16" to 7 15/16". Straight bore mounting for shaft diameters from 1 15/16" to 8 5/8".

Torrington Self-Aligning Spherical Roller Bearings: Completely self-aligning to compensate for any practical angular displacement of shaft. High radial and two-direction thrust capacity for both types of load.

Write for literature. The Fafnir Bearing Company, New Britain, Connecticut.

FAFNIR BALL AND ROLLER BEARING PILLOW BLOCKS

▲ For more details circle **NED-4204** on enclosed inquiry slip ▲



Sessions TIMEKEEPERS
assembled at lower costs by TINNERMAN "TIME-SAVERS"

It was a profitable decision when The Sessions Clock Company selected SPEED NUTS for an important job in the assembly of their famous "Melody" alarm clocks.

By providing a simpler, faster method of attaching the movement to the plastic case, Push-on type SPEED NUTS are saving thousands of dollars annually. This savings was reflected in lower parts cost, shorter assembly schedules, and fewer rejects.

Clocks, cars, or cap-pistols . . . whatever you manufacture, you'll find that SPEED NUT brand fasteners can provide faster, more economical ways to assemble your products. May we conduct a convincing Fastening Analysis for you? Contact your Tinnerman representative for details. And write for your copy of "Savings Stories". TINNERMAN PRODUCTS, INC., Cleveland 13, Ohio. In Canada: Dominion Fasteners Limited, Hamilton. In England: Simmonds Aerocessories, Ltd., Treforest, Wales.

TINNERMAN *Speed Nuts*
FASTEST THING IN FASTENINGS

▲ For more details circle **NED-4205** on enclosed inquiry slip ▲

Handle Scrap FASTER—EASIER

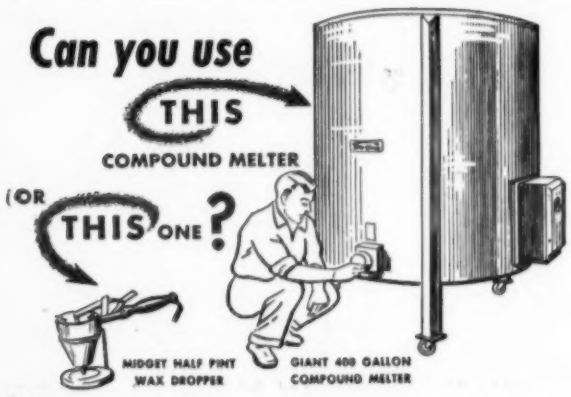
This Burro is handling scrap faster and easier because it moved itself and several cars to the job quickly—and started work without delay.

Burros equipped with magnet, clamshell bucket, dragline bucket, tongs or hook are saving time and money on many jobs in every type of industry. Their powerful draw bar pull (7500 lbs.) and fast travel speeds (up to 22 MPH) make them efficient switch engines too—you can spot cars where and when you want them at a moment's notice. There's no waiting time when a Burro is on your track.

Write for descriptive bulletins

CULLEN-FRIESTEDT COMPANY
1304 S. Kilbourn Avenue Chicago 23, Illinois

For more details circle **NED-4206** on enclosed inquiry slip



Your compound melting and dispensing problem may require a giant or a midget heater . . . or a size and shape somewhere in between. If the equipment you choose carries the name "Sta-Warm", you may be assured it is the *right* equipment for your application.

Sta-Warm will tailor a compound or soft metal or adhesive melter to your job. Or, unusual specifications may start with an engineering survey and special designing.

In either instance you will be assured that your installation is efficient, long lived, economical to operate and maintain and that it will do the most satisfactory job you have any right to expect.

Want to improve compound melting or handling efficiency in your plant? Send us data today and ask for recommendations. No obligation.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST. • RAVENNA, OHIO

For more details circle **NED-4207** on enclosed inquiry slip

HOLD LABELS *SECURELY*! . . TO TIN, METAL, GLASS

Grip-Tight is ideal for food, chemical, paint cans

GRIP-TIGHT Label Paste, the time tested resin emulsion paste, for hand brushing, definitely holds paper labels smoothly, easily, permanently to hundreds of surfaces and materials including: tin cans, metal pails, steel drums, lacquered, painted, varnished surfaces, glass bottles, metal parts, etc.

Use it for attaching product labels, instruction and caution labels, Express Waybills, circuit diagrams . . this *ONE* adhesive may do all your labeling work.

Fill in coupon for further details or send for trial shipment today.

MAIL THIS COUPON TODAY!

Gentlemen: Please ship F.O.B. Chicago or New York, the following trial order ON APPROVAL. Invoice to be cancelled if merchandise not satisfactory.

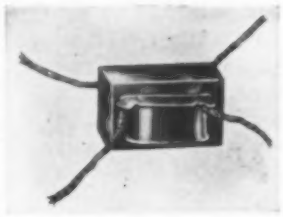
....Quart Jars Grip-Tight at $1.00 ea.
....Gallon Jars Grip-Tight at $3.00 ea.
☐ Send Technical Bulletin describing Grip-Tight and complete price schedule.

Name _____
Address _____
City _____ State _____

PAISLEY PRODUCTS INCORPORATED
Manufacturers of Glues, Pastes, Resin Adhesives, Cements and Related Chemical Products
1770 CANALPORT AVE., CHICAGO 16, ILL. ★ 630 W. 51st STREET, NEW YORK 19, N. Y.

For more details circle **NED-4208** on enclosed inquiry slip

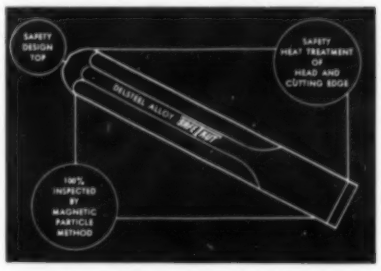
SMALL AUDIO TRANSFORMER measures 0.4 x 0.75 x 0.56-in.



Especially suitable for hearing aid, aircraft and other applications where size and weight are prime considerations, type SSO miniature audio transformer weighs but 0.28-oz. Five stock types cover input, interstage, output and reactor applications; and designs are available also for all types of low level uses requiring wide frequency range. Transformers are vacuum impregnated and employ molded nylon bobbin and nonhygroscopic insulation throughout. Made by **United Transformer Co.**, 152 Varick St., New York 13, N. Y.

For more details circle **NED-4209** on enclosed inquiry slip

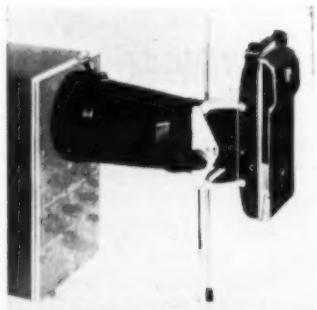
ALLOY STEEL CHISELS for hand and power tool usage



Made of Delsteel alloy, Safe-T-Cut line of tools consists of hand, pneumatic and electric hammer chisels, center punches, paving breaker steels and back-out punches. Features include magnetic particle inspection of each tool, striking end designed to diminish any tendency to 'mushroom' or spall, and heat treatment of striking end of hand tools to produce ample hardness. Alloy from which tools are made has wide critical range to provide redressing ease. Made by **Delaware Tool Steel Corp.**, 3400 Market St., Wilmington, Del.

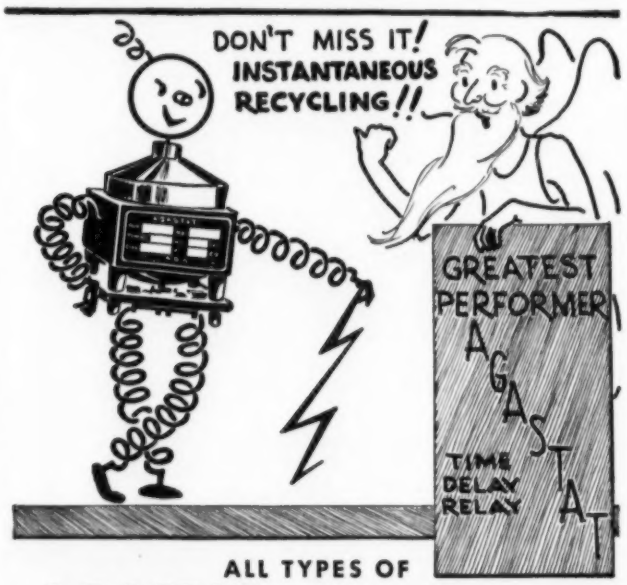
For more details circle **NED-4210** on enclosed inquiry slip

OSCILLOSCOPE CAMERA utilizes Land principle for speed



This F-284 Fairchild-Polaroid oscilloscope camera employs adaptation of Land principle to provide quick prints of oscilloscope traces for engineering study. It can deliver accurate photographic record of single transients or repetitive phenomena without need for darkroom processing and enables prints to be evaluated immediately. Camera is designed for use with any standard 5-in. cathode-ray oscilloscope and consists of adapter that locks in place against tube face; hood that attaches to adapter and provides correct focus for camera; and standard Polaroid-Land body to which has been added f2.8 lens, between-the-lens shutter and two-position over-center shift device. Print size is 3¼ x 4¼ in. with two recorded images reduced by ratio of only 2:1 from original trace. Made by **Fairchild Camera & Instrument Corp.**, 8806 Van Wyck Expressway, Jamaica 1, N. Y.

For more details circle **NED-4211** on enclosed inquiry slip



ALL TYPES OF
AGASTAT TIME DELAY RELAYS
recycle instantly! In the type 1 the delay starts when the control circuit is closed; in the type 2 it starts when the control circuit is open.

Information and literature on request.

AGA AIRPORT LIGHTING · AGA STIMSONITE REFLECTORS · AGA MARINE LIGHTING EQUIPMENT · AGA AGASTAT TIME DELAY RELAYS

AMERICAN GAS ACCUMULATOR COMPANY
1027 NEWARK AVENUE • ELIZABETH 3, N. J.

For more details circle **NED-4212** on enclosed inquiry slip

DON'T SHUT-DOWN MACHINES FOR FREQUENT GLOVE CHANGES!

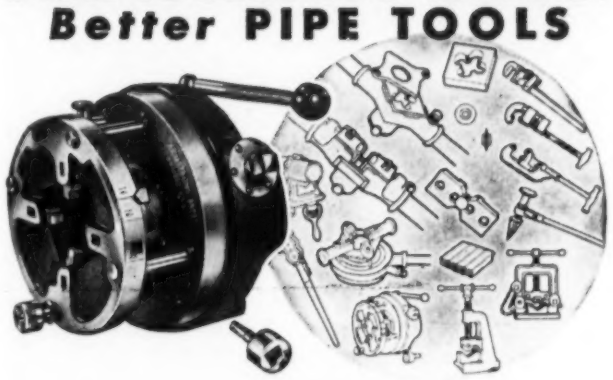
USE **JOMAC** LONGER-LASTING WORK GLOVES

FLEXIBLE
REVERSIBLE
(FIT EITHER HAND)
HEAT-RESISTANT
7 Times the Wear in Every Pair

JOMAC WORK GLOVES
C. WALKER JONES CO.
6148 N. Lambert St. Philadelphia 38, Pa.

For more details circle **NED-4213** on enclosed inquiry slip

ARMSTRONG BROS. Better PIPE TOOLS



An easier, faster, better way to thread 1" to 2" pipe . . .
WITH POWER!

This light (26 lb.) compact Portable Power Pipe Threader, goes to the job—is *operated with a ½" portable electric drill.* 1 set of High Speed Steel Chasers do all sizes—just move indicator to 1", 1¼", 1½" or 2" marking. Clamp on pipe and apply drill to drive square. The rest is automatic. Operating on anti-friction bearings with automatic lead, it's a *fast*, easy way to get smooth, accurate threads.

Write for Catalog

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVENUE • CHICAGO 30, ILL.

For more details circle **NED-4214** on enclosed inquiry slip

Join the hundreds of top companies who are "smart" about their business with uniforms of Reeves Army Twill. Sanforized* and vat-dyed in colors fast to sun, water and perspiration, Reeves Army Twill stays new-looking *and lasts longer* even after repeated washings. Write today for information for your business.

**Residual shrinkage less than 1%.*

REEVES BROTHERS, INC.
54 WORTH ST., NEW YORK 13, N. Y.

For more details circle **NED-4215** on enclosed inquiry slip

OHIO STOCK GEAR "off the shelf service"

Gives You faster deliveries lower costs!

You can make a big cut in your power transmission costs with Ohio Stock Gears. On both the machines you manufacture and the equipment you use, you can make substantial savings by replacing special gearing with these nationally known stock gears. Here's why:

1. They are "stock", manufactured in quantities, hence eliminate the extra cost of "specials".
2. No waits, no delivery delays. You can get them right off the shelf of your nearest distributor.
3. Replacement is quicker, costs less and cuts expensive downtime.

Types Available: spur, bevel, miter, helical, worm and worm gear.
Diametrical Pitches: 24 to 3

Check your gear needs with the nearest distributor listed here and see for yourself the savings you can make on your own requirements.

THE OHIO GEAR COMPANY
1320 East 179th St., Cleveland 10, Ohio
ESTABLISHED 1915

OHIO GEARS

▲ For more details circle **NED-4216** on enclosed inquiry slip ▲

special construction features explain . . .

longer tool life

The reason why AIRETOOL products give longer service is because of their special construction features. AIRETOOL engineers are constantly checking why ordinary tube maintenance tools wear out. This shop and field research helps them design tools strengthened at points of greatest wear to give you extra service life.

expander CONSTRUCTION FEATURES

The ball bearing thrust collar eliminates the danger of friction drag. The ball bearings are encased in a retainer and bear on separate ground raceways. Expanding rolls are tapered to produce unridged, parallel surfaces and uniform tightness.

Special construction features include a drill head which is kept cool under all scale conditions. This is accomplished by using a built-in device which sends the flushing agent through the motor to the drive shaft to the cutting edges. All moving parts of the durable motor are made of heat treated alloy steel.

condenser cleaner CONSTRUCTION FEATURES

● Learn for yourself how much better AIRETOOL cleaners, expanders and accessory tools will meet your requirements. Write The AIRETOOL Mfg. Co., 308 S. Center St., Springfield, Ohio.

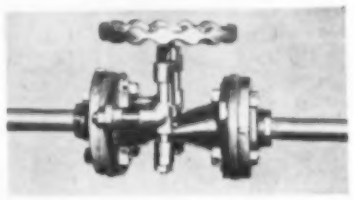
AIRETOOL
MANUFACTURING COMPANY
SPRINGFIELD, OHIO

Branch Offices: NEW YORK, PHILADELPHIA, CHICAGO, HOUSTON, TULSA, BATON ROUGE

There's an AIRETOOL Tube Cleaner and Tube Expander for every type of Tubular Construction.

▲ For more details circle **NED-4217** on enclosed inquiry slip ▲

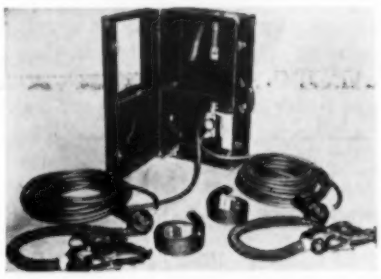
RUBBER PINCH VALVE flexibility offsets misalignment



Capable of outwearing metal when installed in pipelines carrying abrasive or corrosive mixtures, rubber pinch valve is suitable for use in mining, paper, chemical, oil, food and beverage industries. No packing is required; and it absorbs vibration, eliminates water hammer and affords positive seal in closed position. Metal parts can be refitted to new valve bodies when necessary. Valve is available in neoprene for oil resistance, butyl rubber for high heat and severe acid conditions, and pure gum stock for food and beverage conveyance. Sizes range from 1½ to 12 in. Made by **United States Rubber Co.**, 1207 Rockefeller Center, New York 20, N. Y.

▲ For more details circle **NED-4218** on enclosed inquiry slip ▲

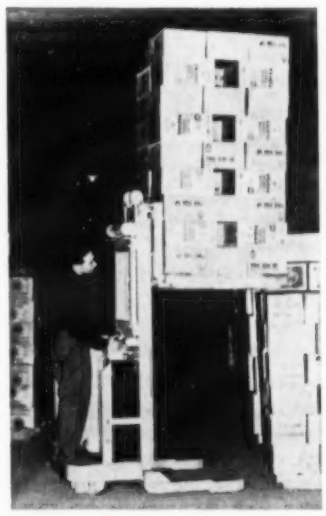
AIR DEMAND RESPIRATOR affords comfort in any atmosphere



Work in extremely hot areas or atmospheres containing chemical fumes or objectionable or irritating gases is made feasible by Air-Pak air demand respirator. Supplying cool fresh air to wearer, it increases his efficiency by enabling him to work in comfort. Respirator is approved by U. S. Bureau of Mines. Made by **Scott Aviation Corp.**, Safety Equipment Div., 272 Erie St., Lancaster, N. Y.

▲ For more details circle **NED-4219** on enclosed inquiry slip ▲

ELECTRIC TIERING TRUCK is of telescopic straddle type



Illustrated SpaceMaker electric tiering truck can handle any two-faced pallet and elevate it to 130 in. Power unit assembly containing drive, elevating motors and battery is interchangeable on all types of company's electric tiering trucks whether for skid platforms or single and double faced pallets. Shortness combined with maneuverability permits right-angle stacking in aisles narrower than overall length of truck and load. Skid type of truck can tier 32 x 40-in. skid load at right angles in 60-in. wide aisle. Made by **LYON-Raymond Corp.**, 4169 Madison St., Greene, N. Y.

▲ For more details circle **NED-4220** on enclosed inquiry slip ▲

Geneva's NEWEST DEVELOPMENT D-140

400x18 PNEUMATIC TIRED DISC WHEEL FOR MANY TYPES OF PORTABLE EQUIPMENT IN FACTORIES, ON FARMS AND ROADS!

★ HERE IS THE ECONOMIC ANSWER TO THE NORMALLY HIGHER PRICED AUTOMOTIVE PNEUMATICS

- LIGHTER WEIGHT—The 4.00/18 - 4 ply is 10 lbs. lighter than the 6.00/16 - 4 ply automotive.
- WHEEL CONSTRUCTION—Drop center rim double disc, seamless steel tubing hub, either tapered or straight roller bearings of highest quality.
- TIRE DESIGN—Diameter 27" or about equal to 6.00/16 automotive. The 4.00/18 Industrial tire has been designed for good cushioning and maximum flotation.

SEND FOR BULLETIN 1013 TODAY!

GENEVA WHEEL CO.
1254 RAILROAD ST., GENEVA, OHIO

50 YEARS OF WHEEL DESIGNING AND MANUFACTURING

▲ For more details circle **NED-4221** on enclosed inquiry slip ▲

FEDERAL

SIRENS

HORNS

BELLS

For all industrial applications; shops, yards, warehouses and structures.

Heavy-duty, precision-built, weather-proof signals for warning, alarm, paging, come-on and other signalling purposes.

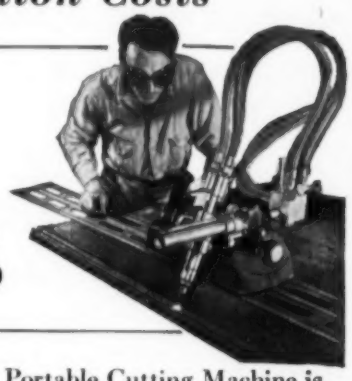
Get in touch with Federal for reliable signalling equipment. Federal, the oldest and largest signal manufacturer, builds precision signals for longer life in heavy duty use.

Write for Industrial Signal Catalogue

FEDERAL ENTERPRISES, INC.
formerly FEDERAL ELECTRIC COMPANY, INC.
8711 South State Street Chicago 19, Illinois

▲ For more details circle **NED-4222** on enclosed inquiry slip ▲

Speed Production.... Cut Fabrication Costs



With this Low-Priced Oxy-Acetylene Cutting Machine OXWELD CM-30

The OXWELD CM-30 Portable Cutting Machine is for cutting straight lines and bevels on metals up to 4 in. thick. It also will cut circles from 2¾ to 96 in. in diameter, and can be hand guided for simple shapes.

Convenient to Use

The CM-30 can be operated either on lightweight track for straight-line cutting, or on the work itself for cutting circles.

Write for a descriptive folder.

THE LINDE AIR PRODUCTS COMPANY
Unit of Union Carbide and Carbon Corporation
30 E. 42nd St., New York 17, N. Y. UCC Offices in Other Principal Cities
In Canada: Dominion Oxygen Company, Limited, Toronto

▲ For more details circle **NED-4223** on enclosed inquiry slip ▲

FOR 8 YEARS STEADY EASY-FLO HAS BEEN MAKING GAS-TIGHT JOINTS FOR JAS. P. MARSH CORP.

Above you see a bourdon tube unit—the heart of the gauges and dial thermometers for which Jas. P. Marsh Corp. of Chicago is justly renowned. Arrows point to the two EASY-FLO joints. These joints must be *gas-tight* and they *must stand up* under the tube's constant flexing in operation. For 8 years steady, EASY-FLO has been satisfying these exacting requirements. So, naturally you find the Jas. P. Marsh Corp. on the long, long list of *satisfied users* of this remarkable low-temperature silver brazing alloy.

WRITE FOR BULLETINS 12-A & 15

They tell you why EASY-FLO makes strong, leak-tight, lasting joints at high speed and low cost—and where and how you can use it to your profit. Write for copies today.

HANDY & HARMAN 82 Fulton St., New York 7, N. Y.
Agents in Principal Cities. In Canada: HANDY & HARMAN of Canada, Ltd., Toronto

▲ For more details circle **NED-4224** on enclosed inquiry slip ▲

DO YOU KNOW?

—that a PILOT LIGHT CAN IMPROVE YOUR PRODUCT . . . add attraction—safety—service?

Ask DIALCO
— what lamp to use
— how to use it
— what it will do
— what it will cost

THIS MAY BE THE ONE
Designed for low cost NE-51 Neon
• Built-in Resistor • Patented
• U/L Listed • Rugged
Catalogue Number 521308 — 997 for 110 or 220 volts.

SAMPLES for design purpose NO CHARGE

NEW! Write for the "HANDBOOK OF PILOT LIGHTS."
Write us on your design problems.

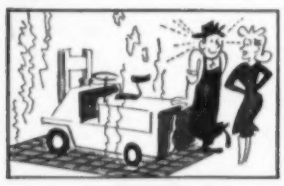
Foremost Manufacturer of Pilot Lights
The DIAL LIGHT COMPANY of AMERICA
900 BROADWAY, NEW YORK 3, N. Y.

For more details circle NED-4226 on enclosed inquiry slip

B.F.Goodrich

T&W TIRE AND WHEEL ANALYSIS PLAN

helps materials handling men cut cost corners



HEAT A FACTOR IN YOUR PLANT? BFG "Oil-Proof" compound is the answer—highly heat-resistant!

No problem is too small . . . nor too large for the T & W analysis man. Ask him in, even though your problems are little ones.

Here's how you can make big savings in tire and wheel costs, equipment maintenance and floor maintenance. An experienced tire and wheel man will survey your operation. He will study loads, hauls, handling equipment, floors and hauling surfaces, and discuss any special problems you may have.

On completion of this survey the BFG man, without charge or obligation on your part, will submit recommendations as to the best type and size tires and wheels for your particular service with information on the longest-wearing compounds and on retreading. He will also provide suggestions on tire care and maintenance.

Send in the coupon below and start the wheels rolling for a B. F. Goodrich industrial tire and wheel expert to visit your plant and make your cost-cutting T & W analysis. You'll find the BFG man is *impartial*. He has no "axe to grind" for any one "type" of tire . . . his company makes and sells *ALL* types in *ALL* sizes!

Dealerships Available In a Few Localities—Write B. F. Goodrich, Akron

The B. F. Goodrich Co.
Department TW-54
Akron, Ohio
Please give me additional information on your new Tire and Wheel Analysis plan.
Name_____
Title_____
Company_____
City_____ State_____

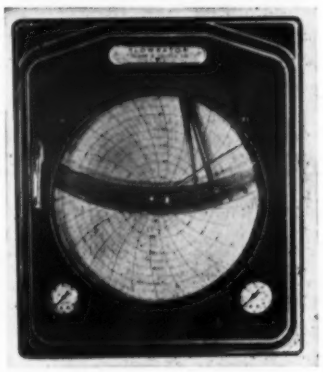
For more details circle NED-4227 on enclosed inquiry slip

BEARING SELECTOR precisely matches balls and races

Predetermination and accurate control of radial play to any desired tolerance is afforded by air-operated Selectionaire device for matching races and balls of bearing assemblies. Serving as process gage as well as inspection instrument, it will indicate before assembly exactly how much space is left between inner and outer races for balls. It can also be used for selection of matching inner and outer races which are unclassified as to actual deviation, and to match races with standard size balls. Classification errors and their accumulation are thus avoided. Device is used with either column or dial type Precisionaire indicator. Foot pedal actuates device for equidistant spacing of spindles to simulate assembled bearing. Made by **Sheffield Corp.**, 721 Springfield St., Dayton 1, O.

For more details circle NED-4228 on enclosed inquiry slip

PROCESS CONTROL INSTRUMENTS accurately measure, exhibit and control temperature and pressure



Simple in design and sturdy in construction, Ratotherm temperature and Ratogage pressure instruments utilize Pneumatrol pneumatic control element with automatic control point reset and choice of 2-20 per cent or 15-200 per cent proportional band adjustment or on-off control. Automatic adjustment of proportional-band width based on rate-of-deviation from control point is available. Instruments can be furnished for hand, pneumatic, ratio or cam setting of control point and can also be incorporated in cascade control systems. When instrument panel and control valve are distant from each other, pneumatic setting of control point from panel permits controller and control valve to be close together to minimize time-lag between control signal and valve response.

Temperature instruments have thermal systems filled with liquid, vapor-liquid or gas and cover ranges between −125° and 1000° F. Pressure types have bellows, multiple diaphragm, slack diaghragm or helical pressure measuring elements covering ranges between 30 in. of mercury vacuum and 10,000 psi pressure. Made by **Fischer & Porter Co.**, 86 County Line Rd., Hatboro, Pa.

For more details circle NED-4229 on enclosed inquiry slip

STOP DUST IRRITATION ...with NEW Sensational Flex-a-foam FILTER MASK

Trial Sample $1.50 Postpaid

Easier to breathe through and talk through than an ordinary pocket handkerchief—yet filters non-toxic nuisance dusts as small as 1/25000 of an inch.

- Extremely light weight—only 1 oz. complete.
- Self-adjusting to every face size.
- Attractively styled to suit the most discriminating wearer.
- Simple in design—only 4 interlocking parts.
- Only respirator made with long-lasting washable filter—can be used over and over again.

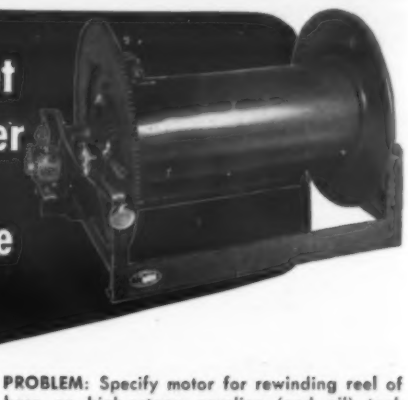
Write TODAY for Descriptive Circular

Here's dust protection... your workers will welcome and WEAR!

THE GOGGLE PARTS COMPANY
1468-70 W. 9th Street • Cleveland 13, Ohio

For more details circle NED-4230 on enclosed inquiry slip

how to get safe power where sparks are taboo



ASK FOR "APPLICATION-IDEAS" BOOKLET — ALSO GAST CATALOG

SEE OUR CATALOG in SWEET'S FILE for PRODUCT DESIGNERS

"AIR MAY BE YOUR ANSWER!"

PROBLEM: Specify motor for rewinding reel of hose on high-octane gasoline (and oil) tank trucks. *Must be 100% safe in explosive atmospheres . . . must run off truck power sources.*

SOLUTION: GAST (Model 4AM) Air Motors connected to truck's high-pressure pneumatic brake system. Developing ¾ H.P., motor is geared down through chain and sprocket.

RESULT: Complete safety with rotary-vane air motor. No sparks—no danger! Variable-speed motor develops plenty of torque for smooth rewinding without jerks.

Many similar—and totally different—engineering problems have been solved successfully with GAST Rotary Air Motors. As original equipment, they offer explosion-proof safety — variable speed from 100 to 6,000 R.P.M. — reversibility — compactness — and other unique advantages. If these features could improve your product, write GAST a brief description of your problem.

GAST ROTARY — AIR MOTORS • COMPRESSORS • VACUUM PUMPS (TO ONE H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Niskley St., Benton Harbor, Mich.

For more details circle NED-4231 on enclosed inquiry slip

PROTECT SMALL TOOLS AND SUPPLIES—keep them handy in this—

BERGER 24 DRAWER PARTS CASE

Here, in one complete package, is your solution to the troublesome problem of protecting small tools and supplies, yet keeping them readily available. This Berger Steel Parts Case provides 24 non-spillable drawers, giving you a minimum of 72 indexed compartments. Dividers are adjustable on 1" centers, and extra dividers can be supplied to make additional compartments. Construction is all steel, strong and rigid, with baked enamel finish. Overall dimensions are 34¼" wide by 10¾" high and either 12" or 18" deep. Drawer dimensions are 5 5/16" wide by 2 1/16" high and either 11⅛" or 17⅛" deep. Similar 12- and 18-drawer cases are available, too. Write for complete information and prices.

BERGER MANUFACTURING DIVISION
REPUBLIC STEEL CORPORATION • • • • CANTON 5, OHIO

For more details circle NED-4232 on enclosed inquiry slip

Lowering heavy loom, truck operator "spots" it just right over bolts on bottom of export case.

Precision HANDLING by ELWELL-PARKERS

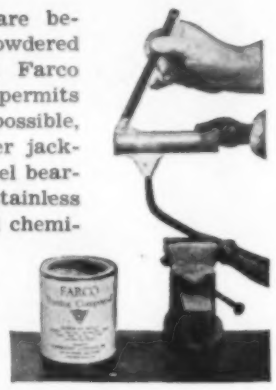
Big loads—valuable loads—delicate loads—*all* can be handled with safety and precision on highly maneuverable E-P trucks. Elwell-Parker's refined engineering, precision construction and precautions against wear make this possible. Simple finger-tip controls give operator complete mastery of the truck at all times. Inching action, plus a smooth, steady flow of power, also helps Elwell-Parkers perform exacting operations like the example shown.

FREE BOOKLET on Scientific Materials Handling. Ask for "Industrial Logistics".

THE ELWELL-PARKER ELECTRIC COMPANY
4094 ST. CLAIR AVENUE • CLEVELAND 3, OHIO

For more details circle NED-4233 on enclosed inquiry slip

TINS ALL METALS



Difficult tinning problems are being solved with a new powdered solder containing flux, called Farco Tinning Compound which permits jobs heretofore considered impossible, such as tinning cast iron water jackets and cylinder heads, cast steel bearings, pipes, cylinders and stainless steel equipment. The powerful chemical formula will lift the oxides from aluminum, and on other metals is more drastic than ordinary acids. Makes it possible to lift the scale and tin black iron in one operation. Stability of the new powder makes it possible to judge heat on large bearings by its action in turning liquid when proper temperature for tinning is reached. Although strong enough to remove scale, dirt, and tin rusty surfaces thoroughly, it does not produce harmful fumes nor will it burn the skin. When used on gasoline motors, Diesel and marine engine bearings it is reported to increase performance life 100%. The compound may be applied with either torch or soldering iron depending on thickness of metal, and any good grade of solder may be used. Packaged in 1½ lb. cans, price $3.00 f.o.b. *Advt.*

FARRELLOY CO.

1246 North 26th St. **Phila. 21, Pa.**

▲ For more details circle **NED-4234** on enclosed inquiry slip ▲

ELECTRON MICROSCOPE
simplified 30-in. table model is designed for industrial applications

Relatively low cost without sacrifice of performance is feature of this Little Giant 30-in. table model electron microscope for industrial and research laboratories. Simplified design centers around new electron optical system that employs permanent magnet lenses. Instrument will provide useful magnifications up to 50,000 diameters by photographic enlargement and direct magnification up to 6000 diameters.

Lower end of magnification range overlaps that of conventional microscope. Specimens can be inserted in evacuated column and removed when desired without breaking vacuum, and photographic plates can be changed without admitting more than small amount of air to column. Pumping time between plates is thus reduced to only 90 seconds.

Microscope retains 50-kv accelerating potential for adequate penetration of specimen to assure detailed image. Instrument is expected to sell for less than $6000. Made by **Radio Corp. of America,** RCA Victor Div., Dept. 200, Scientific Instruments Section, Camden, N. J.

▲ For more details circle **NED-4236** on enclosed inquiry slip ▲

ROTARY GRANULATOR & SIFTER
processes dry or semiwet materials

Equipped with twin rotors of hexagonal bar type which rotate continuously in opposite directions, model No. 44 Twin Rotary Granulator and Sifter has double the screen area of conventional oscillating types. Tray rods are placed at two levels to permit changing trays without stopping machine, and base design allows use of large containers such as drums. Bags can be attached to hopper by using optional flange attachment. Carbon steel screens are furnished as standard with special screens supplied on order. Rotors can be removed through opening in front of hopper, and hopper side panels are removable also for quick and easy screen changing. Made by **Arthur Colton Co.,** 3400 E. Lafayette Ave., Detroit 7, Mich.

▲ For more details circle **NED-4237** on enclosed inquiry slip ▲

Most Widely Used Way of Trapping

HEAVY SLUGS of CONDENSATE

Thousands of installations on steam purifiers attest to the enormous drainage capacity of this Nicholson trap. Piston-operated and with valve orifices up to 2" diam., it discharges large volumes of water almost instantly. Won't leak even if cooked dry; working parts of stainless steel. Also for super - heated steam lines, headers, separators, etc.

CATALOG 250

W. H. NICHOLSON & CO. 162 OREGON STREET WILKES-BARRE • PA.

Sales and Engineering Offices in 53 Principal Cities

▲ For more details circle **NED-4239** on enclosed inquiry slip ▲

ONLY SAFETY BELT HOOKS

have the patented binder bars—are rigidly mounted in double steel strips that hold hooks permanently in alignment, assuring uniform tension across the belt, maximum traction and long belt life. Moreover, these bars protect belts—lap over belt ends, prevent fraying, prevent hooks from pulling out. This better belt lacing comes in 5 sizes. It can be applied with any standard lacer or lacing machine, or, can be applied with an ordinary hammer by using the inexpensive Safety Tu-way Lacer.

Write for Circular

Safety BELT-LACER CO.
5378 N. Menard Ave.
Chicago 30, U. S. A.

▲ For more details circle **NED-4240** on enclosed inquiry slip ▲

OBI NOW... Presses by CLEARING

Now you can get, in open back inclinable presses of 30 tons capacity and larger, the same advanced engineering and modern construction principles which have made large Clearing presses the overwhelming choice of costwise production men.

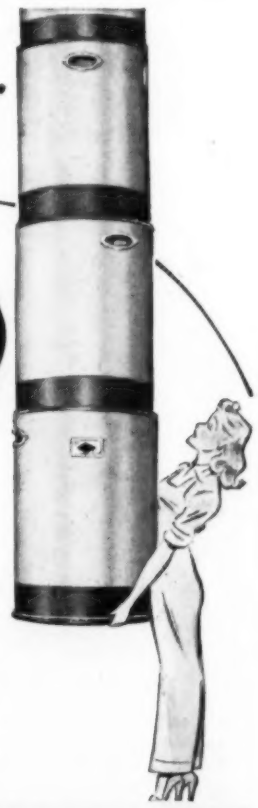
Frames are steel weldments—pioneered by Clearing in the press field—to give these O.B.I. presses greater rigidity, which means more precise operation and longer life for your dies. The swing key positive clutch or the packingless pneumatic clutch, optional on most models, mean quick, trouble-free action.

Send for your free copy of Bulletin 211 for details about this new line of presses.

CLEARING MACHINE CORPORATION
6499 W. 65th Street ★ Chicago 38, Ill.

▲ For more details circle **NED-4235** on enclosed inquiry slip ▲

Suzy the stock girl says...



"I'm 'toting' more goods faster with these containers!"

It's a fact. Workers in plants like yours are handling more materials, faster, and at less cost with Diamond Vulcanized Fibre Receptacles. Made from a tough, durable plastic, they stay on the job longer—will not crack, splinter or peel. Available in a complete range of types: boxes, barrels, trucks, cans, etc. Put a few in your plant now, on a "trial basis". You'll be surprised at their light weight, long life—and the way workers like to use them. Send for descriptive catalog.

C-D DIAMOND FIBRE RECEPTACLES
CONTINENTAL-DIAMOND FIBRE CO., NEWARK 30, DEL.

▲ For more details circle **NED-4238** on enclosed inquiry slip ▲

GET RID OF DANGEROUS

NEO-CORD OIL AND GREASE RESISTANT
COUNTER-TRED SAFETY MATTING

Resists animal fats, chemicals, hot soapy water, polishes, lactic acids, gasoline, kerosene.
Comfortable underfoot. Retards fatigue. Reduces breakage.
Combines Gro-Cord, exclusive cord-on-end construction with Dupont Neoprene to provide the world's greatest non-slip material. The cords are the identical high grade native long staple sea island cotton such as employed in the manufacture of finest tires. Ridges permit drainage and aeration. 23¾" wide. Any length in 12½" multiples.

AMERICAN MAT CORPORATION
"America's Largest Matting Specialists"
1733 ADAMS ST., TOLEDO 2, OHIO

( ) Please send prices on Neo-Cord Counter-Tred Safety Matting.
Please send information on ( ) Ameriflex Flexible Wood Link Matting; Tuf-Tred Tire Fabric Matting; ( ) American Counter-Tred Safety Matting; ( ) Ezy-Rug Colored Rubber Link Matting; ( ) Tile-top Sponge Matting; ( ) Traffic-Tred Matting; ( ) Do-All All-Purpose Rubber and Cord Matting; ( ) Ever-Tred Vinyl Plastic Link Matting.

Name _____
Firm _____
Street _____
City & State _____

IN CANADA { OFFICES: American Mat Corporation, Ltd. Canada Trust Building, Windsor, Ontario
FACTORY: West Lorne, Ontario

▲ For more details circle **NED-4241** on enclosed inquiry slip ▲

IT'S NO SECRET
why Fabricators Specify Superior Seamless Carbon Steel Tubing

HERE'S WHY!

They know that: Superior tube is "Custom Made"—every length drawn to exact specifications: Distributors in key cities have adequate stocks of standard analyses and sizes for quick delivery: Inside and out the finish is always bright and clean: Temper requirements from dead soft to full hard drawn—or even hardened and tempered, are met within close limits: Dimensional tolerances are rigidly held.

They know, too, that: Superior tubing is easy to work on standard production equipment: Superior tubing is available in all practical metals—in scores of analyses in those metals: In Carbon Steels C 1008, MT 1010, MT 1015, C 1118, MT 1020, C 1025, C 1035 and E 1095. For more reasons for the superiority of Superior write for Bulletin 31.

Superior
THE BIG NAME IN SMALL TUBING

All analyses .010" to 5/8" O.D.
Certain analyses (.035" max. wall) up to 1 3/8" O.D.

SUPERIOR TUBE COMPANY • 2018 Germantown Ave., Norristown, Pa.

For more details circle NED-4242 on enclosed inquiry slip

STACKING TOTE BOXES . . .

Eliminate Shelving . . . Reduce Costs

Loaded Convoy Tote Boxes stack ceiling high without intermediate supports. They interlock securely . . . to carry all weight on the triple-constructed ends . . . and, to seal each other from dust and light.

DURABILITY—Thousands have been in active use for over four years. Moisture will not weaken them. They are impervious to machine oils. They have armored rims for rigidity; and strong, comfortable hand holes.

MATERIAL—Our exclusive chemical impregnation process transforms high-test, corrugated fibre-board into flint-hard and rock-strong "CHEM-BOARD".

PRICE AND WEIGHT—50% to 60% less than steel. No maintenance expense. It is economical to order them fitted to your job. Weight averages under 4 pounds per cu. ft. of capacity.

Write for illustrated catalog and price list.

Standard and Custom-Made Nesting • Stacking • Vertical Tote Boxes for Quick Delivery

CONVOY, INC.
P. O. Station B, Box 216-N
CANTON 6, OHIO

For more details circle NED-4243 on enclosed inquiry slip

NEW STOCK LIST
EVERLASTING FASTENINGS

OVER 7000 ITEMS

★ Bolts, Nuts, Screws, Washers, Rivets, Accessories . . .

★ Each in 3 to 10 different non-corrosive metals . . .

★ Brass, Bronzes, Copper, Monel and Stainless Steels.

FREE

MAIL COUPON TODAY

H. M. HARPER CO., 8212 LEHIGH AVE., MORTON GROVE, ILL.
Please rush your current stock list of non-ferrous and stainless steel fastenings showing quantities, sizes and types available for immediate shipment.

Name.....
Company.....
Address.....

For more details circle NED-4244 on enclosed inquiry slip

ALL-PURPOSE FLOOR MACHINE
employs replaceable brush rings

In addition to everyday use for scrubbing, waxing and polishing, Tornado all-purpose floor machine is effective for sanding, steel wooling, pumicing and removing stains and discolorations from all types of floors. Design features include rotary Safety-Grip switch, fully-adjustable handle, self-raising wheels, automatic brush coupler and quick-change snap-on brush rings. Foam-Feed brush design assures even distribution of solution over entire working area when one-finger solution regulator is turned on. Made by **Breuer Electric Mfg. Co.**, 5106A N. Ravenswood Ave., Chicago 40, Ill.

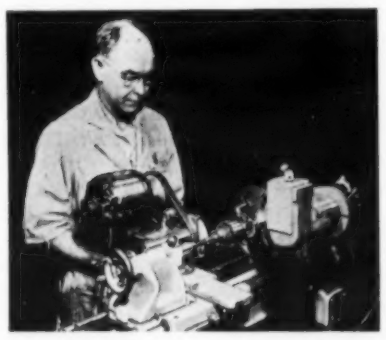
For more details circle NED-4245 on enclosed inquiry slip

LATCHES AND HINGES
are made for special applications

Although originally developed for refrigeration trade, these latches and hinges can be obtained as standard equipment for doors that must have positive seal. Their use can eliminate leakage of heat, steam and air pressure. Users of this equipment at present time include truck body, dry cleaning unit, electronic equipment and drying equipment manufacturers. Made by **Kason Hardware Corp.**, 129 Wallabout St., Brooklyn 6, N. Y.

For more details circle NED-4246 on enclosed inquiry slip

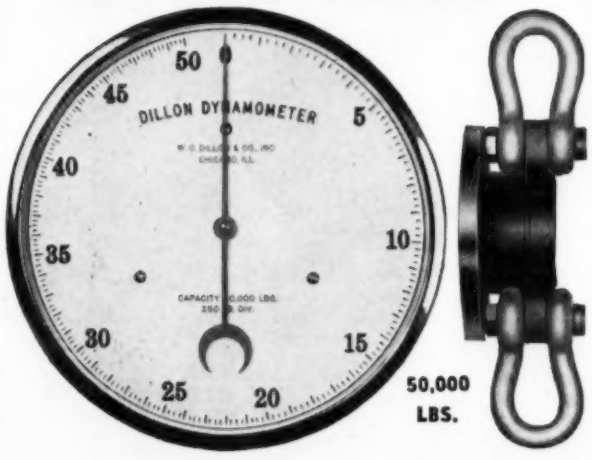
TOOLPOST & BENCH GRINDER
1/4-hp unit is accurate to 0.0002-in.



Operating at 5000 rpm, this utility grinder can be used on 9 to 13-in. swing lathes for external cylindrical grinding and mounts on shaper, planer or milling machine for surface grinding. When not needed for precision work, it can be converted quickly to bench use for burring castings, cleaning welds, wire brushing, polishing and tool sharpening. Construction includes heavy cast frame, constant-speed continuous-duty motor, permanent-mount spindle with precision grease-sealed bearings, fast belt tension adjustment, combination belt and wheel guard, and T-bolt for fast mounting. Models are available for operation on 110 or 220 v, 60 cycles. Made by **Dumore Co.**, Fourteenth & Racine Sts., Racine, Wis.

For more details circle NED-4247 on enclosed inquiry slip

HIGH CAPACITY
IN A SMALL PACKAGE



DILLON TRACTION DYNAMOMETER

For weighing heavy objects or testing strength of fabricated assemblies. Compact, easy to handle. **12 DIFFERENT CAPACITIES FROM 0-500 LBS. UP TO 0-50,000 LBS.** Low in cost—prompt shipment. Has dozens of uses in the average plant. Write for illustrated literature and complete price list.

W. C. DILLON & CO., INC. 5410NE West Harrison St. Chicago 44, Illinois

For more details circle NED-4248 on enclosed inquiry slip

TIME SAVING · MONEY SAVING
ONE MAN OPERATION

For more details circle NED-4249 on enclosed inquiry slip

WHAT MAKES THE DIFFE
in conveying

● Experience. A solid h veyer jobs that we difficult c what makes the dif nce in th ment you buy. If s going equipment must be signed in mind. It must e the w built into it if it is stay on y Engineers have the e of exp the difference. The are nec backed up by the ities of th gically located plan, each veyers and conveye systems to serve production. et us mo problem our busine. Write or engineering serv.

MCC

MATHEWS C
GENERAL OFFICES *Mathews Conve Compa*
PACIFIC COAST DIVISION *Mathews Co yer Co*
CANADIAN DIVISION *Mathews Co yer Co*

Engineering Offices or Sales Agencies in rinci

For more details circle NED-4250 on e

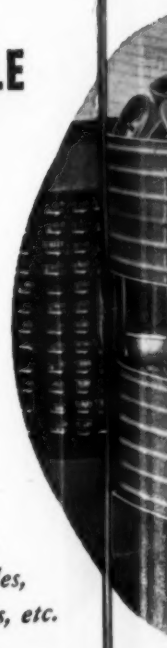
A RECIPE FOR DEPENDABLE CONTAINER SERVICE

1. *Take Double Corrugations and blend with integral knee braces for the best one-piece steel skid platform.*

2. *Add a two-piece welded box complete with one-inch triangular bead top flange (for greater strength), and square corners (for largest volume per square foot of floor space).*

3. *Process in a plant that has specialized in steel fabrication almost 50 years turning out such renowned products as Monotube street lighting poles, foundation piles, transmission poles, cargo booms, etc.*

Union Metal materials handling products are designed to achieve increased production—Safer, Faster and at Less Cost. Make your problem our problem. Write The Union Metal Manufacturing Company, Canton 5, Ohio.



U
Mate

For more details circle NED-4251 on

Houdaille*

Oil Dispensing Unit

This handy truck is designed primarily to dispense oil from drums to machine tool reservoirs or sumps. May also be used to transfer oil between drums or to remove oils or coolants from tanks for dispensing to machine tool sumps.

Unit consists of vacuum pump, motor and pivoted drum platform mounted on heavy steel wheels equipped with roller bearings. Mercoid liquid level control prevents overflow. Quick-Change, air-tight lid is provided for open-end drums. One man can easily operate the unit and do a fast, clean oil handling job at considerable saving in time and labor.

Ideal for use either in central reservoir plant layouts or where many individual sumps require servicing.

Write for complete information, specifications and operating details of the Houdaille Oil Dispensing Unit.

*Pronounced Hoo-Dye

Pivoted drum platform makes it easy to load or dump oil drums.

Manufacturers of the Houdaille Mobile Coolant Filter and the Houdaille Sump Cleaner

HONAN-CRANE CORPORATION
405 Wabash Avenue, Lebanon, Indiana
A Subsidiary of **HOUDAILLE-HERSHEY CORP.**

le NED-249 on enclosed inquiry slip ▲

E DIFFERENCE

nveying equipment?

erience. A solid background of con-act were difficult and diverse. That's the difference in the conveying equip-y. If it's going to satisfy you, the must be designed with your problem must have the weight and strength f it is to stay on your job. Mathews ve the type of experience that makes e. There are nearly 50 years of it, y the facilities of three modern, strate-ed plants, each specializing in con-conveyor systems that are engineered duction. Let us make your conveying business. Write today for bulletins ng service.

W CONVEYERS

Conveyor Company . . . . . Ellwood City, Pennsylvania
ws Conveyor Company West Coast . . San Carlos, California
s Conveyor Company, Ltd. . . . . Port Hope, Ontario
s in Principal American and Canadian Cities

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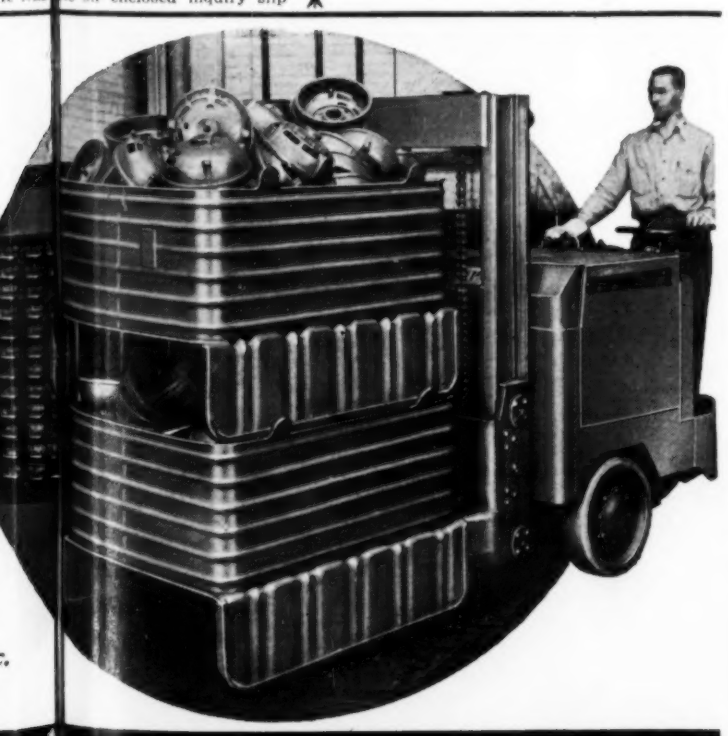


UNION METAL
Materials Handling Equipment

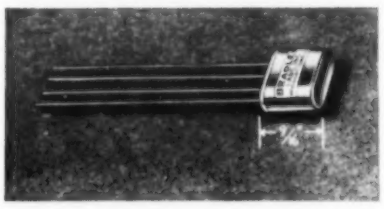
le NED-251 on enclosed inquiry slip ▲

RECYCLING TIMERS
on-off time cycle is changed easily

Overall time cycles can be changed on series CM cam recycling timers by substituting different ratio gear and rack assemblies. Fifty such assemblies are available as standard equipment. Over 650 different time cycles from one revolution in 15 seconds to one revolution in 72 hours can be obtained from eleven different timers in series. Unit consists of heavy-duty synchronous motor, adjustable cam and single-pole double-throw snap-action switch assembled on steel chassis. Cam, shown at right of illustration, is adjustable for on and off cycles ranging from 2 to 98 per cent of overall time cycle. Timers have wide range of control applications. Made by **Industrial Timer Corp.**, Dept. N, 115 Edison Place, Newark 5, N. J.

▲ For more details circle **NED-4252** on enclosed inquiry slip ▲

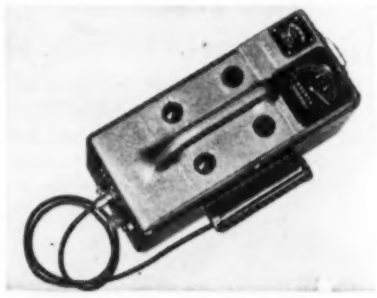
PRECISION RECTIFIERS
small units are hermetically sealed



Rated up to 6 v ac and 5 ma dc, series CX3 copper oxide rectifiers are hermetically sealed for instrument use. They can be supplied for conventional bridge, center tap, half wave circuits or as balanced and matched units for modulators and related equipment. Furnished with four tinned leads, they are enclosed in 11/16 x 9/16 x 1/4-in. container. Made by **Bradley Laboratories, Inc.**, Dept. A, 82 Meadow St., New Haven 10, Conn.

▲ For more details circle **NED-4253** on enclosed inquiry slip ▲

BATTERY-OPERATED SCALER
is portable Geiger-Muller type



This model No. 80 portable battery-operated scaler is designed to make accurate determinations of radioactive levels in locations where conventional power supplies are not available. Instrument consists of G-M tube and probe, Scale-of-Eight electronic counter, mechanical register and adjustable high voltage battery supply. It has maximum continuous counting rate of 14,400 counts per minute and will resolve individual pulses at 90 microseconds. Summation of counts is indicated by mechanical register plus reading of interpolation microammeter. Entire unit is housed in sturdy one-piece magnesium casting with removal backplate that is hermetically sealed against dust and moisture. Made by **Berkeley Scientific Co.**, Dept. DCU-701, Sixth & Nevin Ave., Richmond, Calif.

▲ For more details circle **NED-4254** on enclosed inquiry slip ▲

INVESTIGATE THE "BEAR" METHOD, if Dy-Namic Balancing of rotating parts is a stranger to your plant! Find out how this PROVEN technique reduces wear of valuable machinery . . . eliminates noise, vibration . . . improves efficiency of finished product!
FREE Dy-Namic Balancing Manual TELLS ALL!
Bear Mfg. Co., Dept. N-5, Rock Island, Ill.

4084

"BEAR"
STATIC AND *DY-NAMIC BALANCING* MACHINES

▲ For more details circle **NED-4255** on enclosed inquiry slip ▲

GOOD WIND-ABILITY

GOOD WORKABILITY

are qualities found in
Essex Extra-Test Magnet Wire

Essex Extra-Test Magnet Wire has the good windability and workability necessary for random or layer winding at any speed.

It slides evenly and smoothly in place; results in maximum turns in minimum space and in coils that pack tight.

When Essex Extra-Test is used for motor armatures its extra abrasion resistance reduces possibility of damage to insulating film, no matter how narrow the slots.

When you specify Essex Extra-Test Magnet Wire for layer winding you insure against broken wires, crossed turns, runbacks, spaced turns and frequent tension adjustments. Write for prices.

WIRE SX PRODUCTS

ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

Plants: Fort Wayne, Indiana; Detroit, Michigan; Anaheim, California. Warehouses* and Sales Offices: *Atlanta, Georgia; *Boston, Mass.; *Chicago, Ill.; Cleveland, Ohio; Dallas, Texas; Dayton, Ohio; *Detroit, Mich.; *Kansas City, Mo.; *Los Angeles, Calif.; Milwaukee, Wis.; *Newark, N. J.; Philadelphia, Pa.; *Portland, Oregon; *St. Louis, Mo.; *San Diego, California; *San Francisco, California.

▲ For more details circle **NED-4256** on enclosed inquiry slip ▲

That Dissipate Static Electricity!

● Wagons, sweepers, trucks, hospital carts . . . anything that rolls . . . can now be equipped with silent, static-discharging wheels made of Republic's new electrically conductive rubber!

The tough, wear-resistant rubber wheels are a "must" for use around explosives, inflammable dusts and vapors.

Through the use of Republic's special new process, rubber is transformed into an electrically conductive medium that dissipates high static charges . . . ends sparking hazards.

Play safe! Put these resilient safety wheels on all your equipment. They are expertly molded to proper specifications by Republic Rubber, the specialist in the field of industrial rubber for nearly a half century.

Contact your local Distributor or write direct for information.

Pioneers in the use of COLD RUBBER

INDUSTRIAL RUBBER PRODUCTS BY
REPUBLIC RUBBER DIVISION
Lee Rubber & Tire Corporation
YOUNGSTOWN, OHIO
FOR LEE TIRES & TUBES • CONSHOHOCKEN, PA.

▲ For more details circle **NED-4257** on enclosed inquiry slip ▲

You Need MODERN EQUIPMENT to Fight Soot ECONOMICALLY

GE AVI-F908 FURNACE CLEANER

This high-vacuum, heavy-duty Furnace Cleaner is G-E-engineered to do the job easier, quicker, more economically. Weighs ONLY 51 lbs. 1 full H. P. (43" water lift). Readily converted into a powerful BLOWER. Moderately priced. Used regularly —it helps PAY FOR ITSELF in a single season.

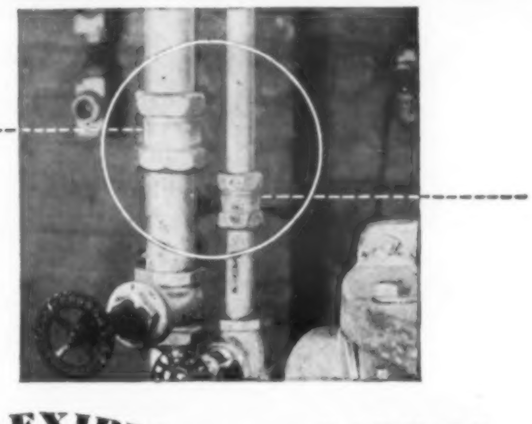
MAIL THIS COUPON

General Electric Company, Dept. 22-2618
1285 Boston Ave., Bridgeport 2, Conn.
Certainly, I'm interested in Cutting Down Fuel Bills—send me the new Folder showing G-E Furnace Cleaning Equipment.

Name.....
Firm.....
Address.....
City..... Zn..... State.....

GENERAL ELECTRIC

▲ For more details circle **NED-4258** on enclosed inquiry slip ▲



"FLEXIBLE-TIGHT" JOINTS

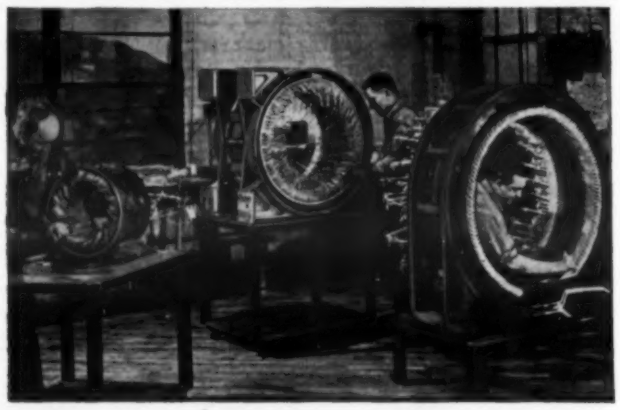
FOR FACTORY PIPING

For piping up to 2" in diameter, Dresser Style 65 "No-Thread" Fittings provide quick, permanent connections. On equipment piping, on gas, oil, water, air lines, these handy joints stay tight despite vibration, expansion and contraction. No pipe threading, no exact pipe aligning. The only tool needed is a wrench. Write today for catalog.

DRESSER "NO-THREAD" FITTINGS

Dresser Manufacturing Division (One of the Dresser Industries), 59 Fisher Ave., Bradford, Pennsylvania. In Texas: 1121 Rothwell St., Houston. In Canada: 629 Adelaide St., W., Toronto. Sales Offices: New York, Chicago, Houston, San Francisco.

▲ For more details circle **NED-4262** on enclosed inquiry slip ▲



℞ for Ailing Motors –

DEPEND ON REPAIR SERVICE LIKE THIS!

A MIDWEST UTILITY recently learned what Allis-Chalmers Certified Service really means! When a vital 75 hp motor had an insulation failure, Chicago Electric, an A-C Certified Service Shop was called. In just 5 hours, the motor was completely repaired and back on the line!

You get this kind of service from over 80 A-C Certified Service Shops in every major industrial area . . . service that meets factory standards in quality parts and workmanship. For *new* motors or controls, too, see your nearest A-C Certified Service Shop or Authorized Dealer.

A-3059

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

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you can HOLD ANY METAL

OR NON-MAGNETIC MATERIAL

with your present MAGNETIC CHUCK

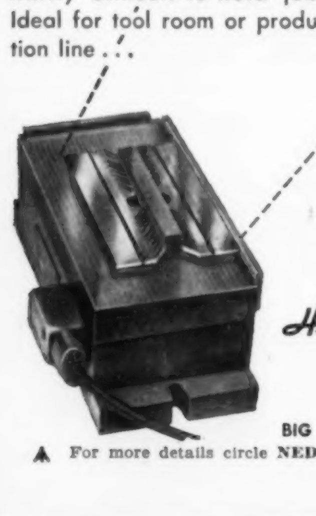
Now, with *Magna-Vise*, you can secure the time-saving advantages of magnetic chucking for a wide range of rigid materials. Saves time, cuts costs on ordinarily difficult-to-hold jobs. Ideal for tool room or production line . . .

Magna-Vise*

HOLDS THESE MATERIALS

Aluminum, Copper, Brass, Fibre, Stainless steel, Plastic, Glass, Magnesium, Chrome tool steel

and many others



Get all the facts and you too will want Magna-Vise. Write today to Dept. ND-60.

Find out about the *extra holding* power of Magna-Lock Chucks.

Magna-Lock

*Patented

Hanchett MAGNA-LOCK CORPORATION

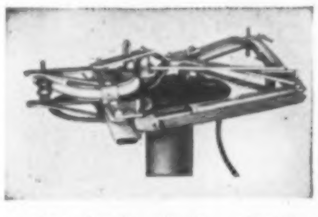
Magnetic Chucks and Devices

BIG RAPIDS • MICHIGAN, U. S. A.

▲ For more details circle **NED-4264** on enclosed inquiry slip ▲

HYDRAULIC BENDER

handles up to 2-in. standard pipe

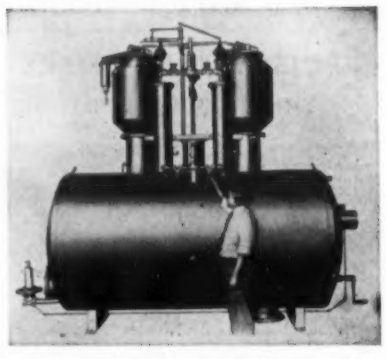


Hydraulically operated model of Hossfeld No. 2 universal pipe, bar and angle iron bender makes full 180-degree bends on standard pipe. Cylinder returns swinging frame to starting position rapidly while operator feeds stock. Overloading is prevented by relief valve. Consisting of motor, pump, cylinder and foot control, hydraulic unit can be attached to any No. 2 model now in use. Made by **Hossfeld Mfg. Co.**, Dept. NED, 460 W. Third St., Winona, Minn.

▲ For more details circle **NED-4265** on enclosed inquiry slip ▲

CONTINUOUS ACETYLENE GENERATOR

output is 500 to 2500 cu ft per hr



Designed to supply acetylene to points of usage by pipe line distribution, model A-Twin generator utilizes two carbide hoppers to provide continuous flow without shutting down for recharging. When supply of ¼ x 1/12-in. calcium carbide in one hopper is exhausted, second hopper automatically goes into service. First hopper can then be refilled and cycle repeated. Unit can be operated at any desired pressure up to 13 psi and is available in five sizes producing from 500 to 2500 cu ft of acetylene per hour. Large size of tanks and amount of water they contain at all times permit meeting overload demands. Made by **Sight Feed Generator Co.**, Dept. 100, West Alexandria, O.

▲ For more details circle **NED-4266** on enclosed inquiry slip ▲

PORTABLE AIR SAMPLER

measures chromic acid mist in air

Accurate on-the-spot analyses of atmospheric concentrations of chromic acid mist in automotive, electrical appliance and household utensil industries and commercial plating establishments are possible with M-S-A Samplair portable air sampler. It can be used also to check poor ventilation, defective piping and faulty processing systems. Basically hand-operated pump, instrument can be used where electric power is unobtainable. Determinations are made by comparing filter paper disks used for tests with established color standards. Filters will indicate concentrations from 0.5 to 4.0 milligrams per cu cm. Made by **Mine Safety Appliances Co.**, 220 N. Braddock Ave., Pittsburgh 8, Pa.

▲ For more details circle **NED-4267** on enclosed inquiry slip ▲

UNIVERSAL
INDUSTRIAL CONVEYOR

Low First Cost . . . .
Low Maintenance

Illustrated is model for punch press operation. Other models designed to meet a wide range of conveyor problems.

Furnished in 5 lengths— 8, 12, 16, 20 and 24 feet.

Literature and estimates on request.

- Removable sides to permit handling large cartons or parts.
- Motor totally enclosed inside conveyor body easily accessible through removable ventilating panel.
- Elevates to desired height with simple hoisting mechanism.
- Driven by means of roller chain to roller bearing equipped gear box.
- Main drive shaft and idler pulley operate on double-sealed ball bearing.
- Standard belt width, 12 inches. Other widths can be furnished to meet your requirements.
- Belt speed, 74 F.P.M.—adjustable if desired.

INDUSTRIAL ENGINEERING & MFG. CO., INC.
BRIMFIELD, INDIANA, U.S.A.

▲ For more details circle **NED-4268** on enclosed inquiry slip ▲

HAVE YOU EVER BOUGHT YOUR WIFE A MINK COAT AT RABBIT PRICES?

SAVE UP TO 85% IN WAR SURPLUS

We,ve gone NUTS!!

Just Purchased 180,000 lbs. of the FINEST PRECISION Made ELASTIC & FIBER LOCK NUTS!! All are NEW!!

Here's your chance to "STEAL" Aircraft Quality STOP NUTS at less than the cost of common commercial hex nuts. They're ALL NEW Cad plated Steel and a large quantity are even pre-tapped for easier wrenching. ELASTIC or FIBER LOCK SEAL gives a Positive, Shake-proof, Vibration & Rust Resistant fastener. No lock washer necessary. One Operation does the job. Just run on the nut. Ideal for use in all types of metal fabrication, assembly, construction etc.,

ALL NEW! AND LOOK AT THESE PRICES for ELASTIC or FIBRE LOCK STOP NUTS

Prices per 100 in these quantities - Special Discount for larger quantities

	100	1000	10,000	25,000	50,000	100,000	500,000
640	$.49	$.25	$.21	$.19	$.17	$.15	$.13
832,836	.59	.31	.28	.25	.23	.21	.19
1032	.59	.31	.28	.25	.23	.21	.19
1/4-28 FL	.63	.39	.36	.33	.30	.27	.25
1/4-28 PT	.63	.39	.36	.33	.30	.27	.25
5/16-24PT	.84	.64	.61	.58	.56	.54	.49
3/8-24PT	.94	.74	.71	.68	.66	.64	.59

Note. FL means Fiber Lock (not pre-tapped.) PT means Pre-tapped, ESSNA Brand.

AIR TOOLS

10,000 in various makes, sizes & types. Cleco, Aro, Ingersoll Rand, Chicago Pneumatic, Buckeye

ARO PISTOL $22.50 AIR DRILL or AIR MOTOR with 1/4" Jacobs chuck.

E2, 3X, 2X, OY. $55.00 VALUE Pistol or Gooseneck NO. 181 PISTOL Only $8.95

NEW BEARINGS

These are the Finest, Precision, AIRCRAFT BEARINGS!! We have more than 168 types and sizes in TREMENDOUS QUANTITIES!!! Needle, Roller, Recessed, Rod End, Shielded, Unshielded, Self-aligning, etc. Made by some of the WORLD'S LEADING MANUFACTURERS OF BEARINGS.... Yours at a FRACTION of COMMERCIAL PRICES. Write for complete list. Adapt to your use!

PALLEY SPECIALS on HYDRAULIC PUMPS & CYLINDERS

P-1 PESCO PUMP - Positive displacement gear type. Capacity: 1 gal. per minute, at 1500 RPM at 1500 PSI. Operating speed: 3700 RPM intermittent max. 4500 RPM. Rotation: either direction with slight adjustments. $9.49

NEW HYDRAULIC CYLINDER NEW $22.50

Gives 20,000 lb. thrust (push or pull) using 1500 PSI line pressure as obtained from our hyd. pumps. Will produce up to 40,000 lb. thrust with 3,000 PSI. CAN ALSO BE OPERATED ON LOW PRESSURE AIR SYSTEMS. 4" bore, 18" stroke, 30½" length. Ideal for Road—Farm—Shop Machinery.

BENDIX HAND PUMP

Provides instantaneous power to operate Hydraulic Systems. Delivers 3000 to 5000 PSI. Has built-in reservoir and Pressure Relief Valve. Can be adapted to 100's of uses in simple hydraulic systems. NEW $15.95 Used - Good Condition 11.95

P-4 VICKERS ANGLE PUMP

Positive displacement type, angle piston. Displaces .507 cu. in. per revolution. Has capacity of 6 gal. per min. at 3000 RPM at 1500 PSI. Pressure limit is 1500 PSI continuous, 1875 for 15 sec. Operating speed of 3750 RPM, intermittent maximum 4500 RPM. Rotates to the right only. Motor

$14.49

Order from this Ad. All sales final. All Prices F.O.B., Glendale. Pay by M.O. or Check. P.O.'s Accptd. from D.& B. firms. ½ deposit with C.O.D's.

PALLEY SUPPLY CO. DEPT. NED-6 6321 SAN FERNANDO RD. GLENDALE 1, CALIF.

NEW 1950 CATALOG 72 pages of Machine Tools (taps, drills, dies reamers, etc.) Hydraulic Cylinders & Valves, Air Tools, Bearings. Write Today for your Copy.

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Where can you use Tempilaq°?

to signal → • working temperatures • overheating

Also available as TEMPILSTIKS° and TEMPIL° PELLETS

Apply a thin smear before heating begins. It dries quickly to a dull mark. When the specified temperature is reached, this mark liquefies sharply. On cooling, it resolidifies with a distinctively different glossy or crystalline appearance.

2 OZ. BOTTLE $2

AVAILABLE IN 48 DIFFERENT TEMPERATURE RATINGS FROM 113°F TO 1600°F

TEMPIL° CORPORATION
132 WEST 22nd STREET
New York 11, N. Y.

FREE Write for trial bottle of TEMPILAQ°. Be sure to state temperature of interest to you

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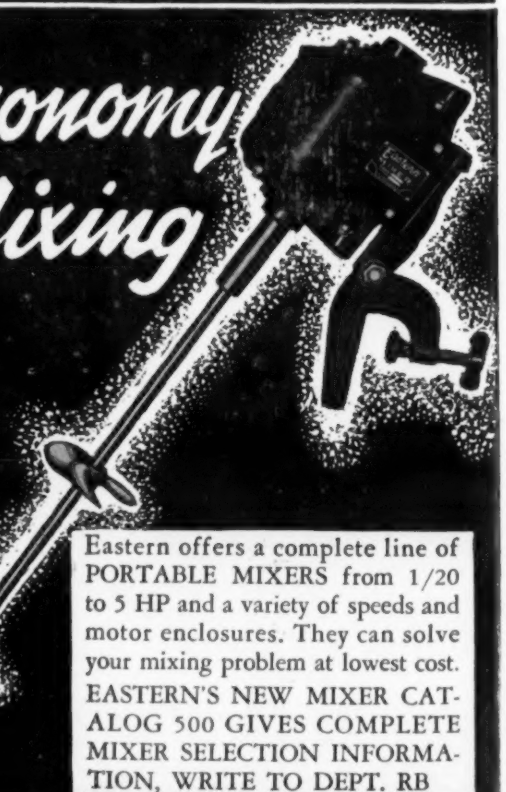
Economy Mixing



Eastern offers a complete line of PORTABLE MIXERS from 1/20 to 5 HP and a variety of speeds and motor enclosures. They can solve your mixing problem at lowest cost.

EASTERN'S NEW MIXER CATALOG 500 GIVES COMPLETE MIXER SELECTION INFORMATION, WRITE TO DEPT. RB

Eastern INDUSTRIES INC.
REGENT ST. EAST NORWALK, CONN.

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STANLEY HAMMERS

...each designed to do its job better

STANLEY NO. 51½ NAIL HAMMER

STANLEY NO. 310 BALL PEIN

STANLEY NO. 452 TINNER'S SETTING

STANLEY NO. 594 SOFT FACE

In the broad line of Stanley Hammers are types eminently fitted for a wide variety of work in industrial plants. Each of the types illustrated here is for a different kind of work.

For the packing and shipping room, and building maintenance work, the No. 51½ Stanley Nail Hammer. For machine shop and product service work the No. 310 Ball Pein Hammer and the No. 232 Machinist's Riveting Hammer. For assembly and light metal forming, the No. 594 Soft Face Hammer. Each is available in a variety of weights and sizes to meet all industrial needs. Stanley Tools, New Britain, Conn.

THE TOOL BOX OF THE WORLD

STANLEY

Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

For more details circle NED-4272 on enclosed inquiry slip

field tests show

18 TIMES THE WEAR

SURETY'S

NEW SURESEAL PK GLOVES

(with GRIPTITE FINISH)

In tough, on-the-job tests, Sureseal PK Gloves with Griptite Finish wore 18 times as long, handled 18 times as many parts, as good hot mill gloves with ¼-inch thick wrappings of friction tape. And that kind of wear means LOW glove costs.

Sureseal PK Coating is super-resistant to chemicals, won't crack or peel. Surety's exclusive Griptite Finish grips effectively, wet or dry, oily or not—won't scratch metal, lasts as long as the gloves. Band top or knit wrist types available, with or without ventilated back.

Write for sample (on your business letterhead, please, specifying job involved).

Dept. N.

THE SURETY RUBBER CO. CARROLLTON, OHIO

For more details circle NED-4273 on enclosed inquiry slip

NEW MAGNET DEVELOPMENTS by ERIEZ

NEW MAGNETIC SWEEPERS CLEAN FLOORS; RETRIEVE IRON PARTS FROM TANKS

A LOW-COST permanent magnetic device for sweeping up or retrieving iron and steel from floors, parking lots, plating tanks, etc., is now being marketed by the Eriez Mfg. Co.

The magnet operates just like a carpet sweeper, with the magnetic tube mounted between Neoprene wheels. Ferrous material literally jumps to the magnet and spreads itself over the entire circumference to a thickness of about ¾". Unloading is accomplished at either end by simply pushing the wiper ring from one end of the tube to the other, where a non-magnetic section causes the load to be released. Sweepers vary in width from 12" to 36". Length 56".

The tank magnet is extremely useful in removing ferrous parts and contamination from alkali baths, plating tanks, etc. Design is similar to that of the floor magnet except stainless steel is used in its fabrication. 48" overall length.

Prices on the Eriez Rotary Magnets range from $26.50 to $53.50 in different sizes. For more information, or to order, write . . .

Eriez Manufacturing Company, 59 East 12th Street, Erie, Pa.

ERIEZ ERIEZ ERIEZ ERIEZ ERIEZ

For more details circle NED-4274 on enclosed inquiry slip

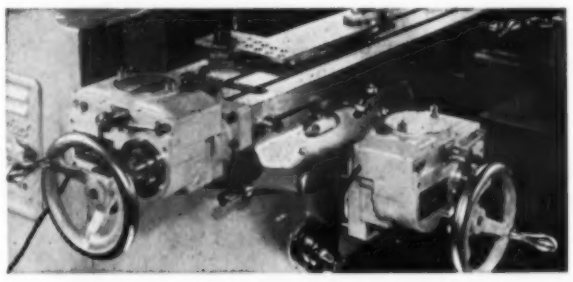
FORK LIFT TRUCKS handle 2000 lb at 24-in. load center

Single hydraulic tilt-raise-lower control lever is feature of cushion-tire model FA-20-24 and pneumatic-tire model FPA-20-24 fork lift trucks. Transmission affords two speeds forward and two in reverse, and gear shift levers are mounted on steering column. Lifting capacity permits handling of 2220-lb load at 20-in. and 2600-lb load at 15-in. load center. Although variety of lifting heights is available, standard mast has collapsed height of 64½ in. with 85-in. lift. Design and operating features include solid carriage plate, forged forks, adjustable cushion operator's seat, large diameter steering tires and easy maneuverability. Made by **Buda Co.**, Dept. LF, 15440 Commercial Ave., Harvey, Ill.

For more details circle NED-4275 on enclosed inquiry slip

PRECISION WORK POSITIONER usable on almost all machine tools without affecting normal operation

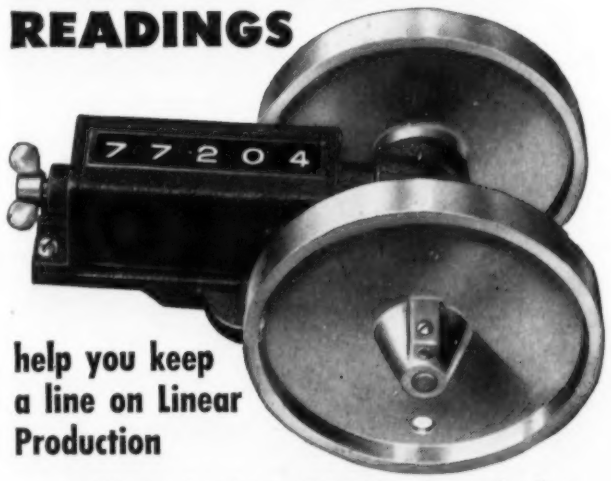
Pattern of holes is located quickly and accurately by means of this co-ordinator and reproduced as often as desired through preformed records cut on cylinders. Device combines ordinates dimensioned from two perpendicular base lines to locate centers of holes to be machined. Ordinates combined in co-ordinator are recorded on cylindrical records with micrometer accuracy to form Micro-Patterns. With these mounted in device, operator can set machine to every hole-position recorded with high degree of accuracy without reference to drawing or other measuring means.



Co-ordinator will compensate for errors in pitch of traverse screws and racks of machine tools in applications where errors are beyond required tolerances. It expedites small lot production, insures accurate work and reproduction, and minimizes operator fatigue and error. In many instances, it eliminates need for jigs; and where they are indicated, will reduce time required for making them. On work requiring layout preliminary to drilling and boring, positioner can be used to lay out and center-drill hole patterns accurately and quickly. Made by **Benzon Machine Co.**, 704 Washington Ave., Lansdale, Pa.

For more details circle NED-4276 on enclosed inquiry slip

DIRECT VEEDER-READINGS



help you keep a line on Linear Production

It's as simple as this: Textiles and other materials pass under the smooth-surfaced twin wheels. And the worm-drive gears inside the counter cause the 5 figures to indicate directly in yards, feet, meters, or other units. The wheels are one foot in circumference . . . and other types of wheels, even grooved ones, can be had, for other purposes and materials. This Reset Worm-Driven Counter is one of scores of Standard Veeder-Root Counters. Write for Condensed Catalog to

VEEDER-ROOT INC., HARTFORD 2, CONN.

For more details circle NED-4277 on enclosed inquiry slip

. . . WON'T SHAKE LOOSE

FLEXLOC

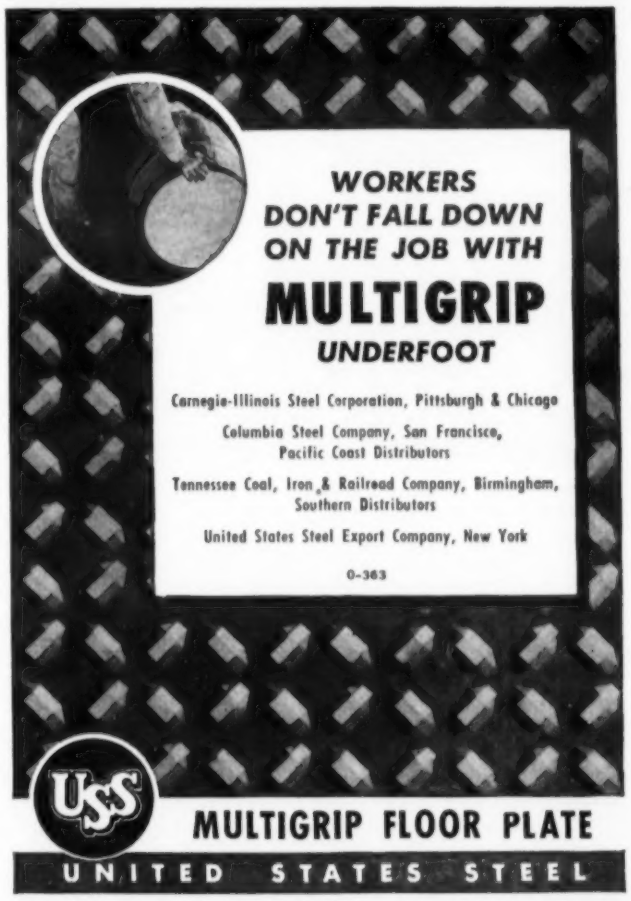
ONE-PIECE SELF-LOCKING NUTS

The FLEXLOC is one-piece, all-metal . . . has ample tensile and long life. It is a Stop and Lock-Nut that can be reused many times. Its "chuck-like", resilient locking segments lock the FLEXLOC securely in any position on a threaded member. It positively "won't shake loose", yet can be removed easily with a wrench.

Write for Catalog 619, it's full of Information.

SPS STANDARD PRESSED STEEL CO. JENKINTOWN 24, PENNSYLVANIA

For more details circle NED-4278 on enclosed inquiry slip



USS MULTIGRIP FLOOR PLATE

UNITED STATES STEEL

For more details circle NED-4279 on enclosed inquiry slip

50 Models & Sizes · Get Latest AMERICAN Catalog · MAIL COUPON

AMERICAN PRESSED-STEEL HAND TRUCKS

"AMERICAN" HAND TRUCKS give you efficient material handling at lowest cost. Their light weight and perfect balance mean speedy, easy handling. All-steel construction—practically indestructible — includes rubber-tired, pressed-steel center, ball-bearing wheels. Get "American" Hand Trucks for every job. Stocked by distributors everywhere.

The American Pulley Company

4294 WISSAHICKON AVE., PHILADELPHIA 29, PA.

Please mail free "American" Hand Truck Catalog

NAME _____

COMPANY _____

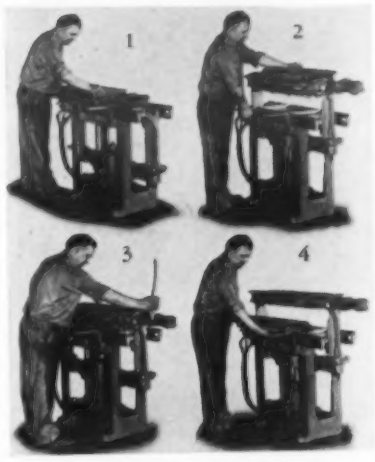
ADDRESS _____

CITY _____ ( ), STATE _____

For more details circle NED-4230 on enclosed inquiry slip

▲ For more details circle **NED-4281** on enclosed inquiry slip ▲

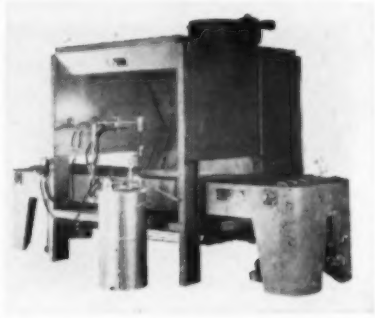
CORE DRAWING MACHINE handles boxes from 24 to 36-in. long



Capable of performing one complete cycle in from 18 to 42 seconds, model CD-36 core drawing machine is suitable for operation with any type core blower. Unit can be used singly, in pairs for double shuttle operations and in circular conveyor systems handling high production. Air powered by standard 80-psi line pressure, machine can be operated by one man. Guide rail is supplied in width to meet individual job requirements. Hinged yoke type trunnion can be furnished to facilitate handling of deep core boxes. Illustration shows, in numerical order: worker positioning core box; core box in raised rolled over position and core plate supports being positioned; core box lowered and clamps removed; and core box drawn and core being removed from machine. Made by **Spo Inc.**, 6474 Grand Division Ave., Cleveland 5, O.

▲ For more details circle **NED-4284** on enclosed inquiry slip ▲

AUTOMATIC LACQUERING UNIT for industrial production finishing



Suitable for applying lacquer on wallboard and small objects such as compacts and costume jewelry, illustrated type F42-SL automatic airfinishing unit was originally designed to lacquer minimum of 4200 book covers per hour. Products are fed to machine either manually or by conveyor belt and pass under adjustable two-gun coating station at speed of 45 fpm. Unit is supplied complete with heavy pressed steel conveyor, ball bearing pulleys, rollers, variable speed explosionproof motor conveyor drive with speed reducer, off-and-on control, air conditioner, air regulator, two air brushes and 15-gal Clamptight pressure feed material tank. Airfinishing booth furnished with unit measures 4 x 5 x 5 ft. Made by **Paasche Aribrush Co.**, Dept. 3, 1909 Diversey Parkway, Chicago 14, Ill.

▲ For more details circle **NED-4285** on enclosed inquiry slip ▲

DO YOU KNOW? "What's Your Safety IQ?" a safety quiz on 35-mm and 16-mm sound slide film shows common, unsafe, off-the-job actions and conditions that can cause accidents. Film can be purchased or rented from National Safety Council, 20 N. Wacker Dr., Chicago 6, Ill.

▲ For more details circle **NED-4296** on enclosed inquiry slip ▲

▲ For more details circle **NED-4288** on enclosed inquiry slip ▲

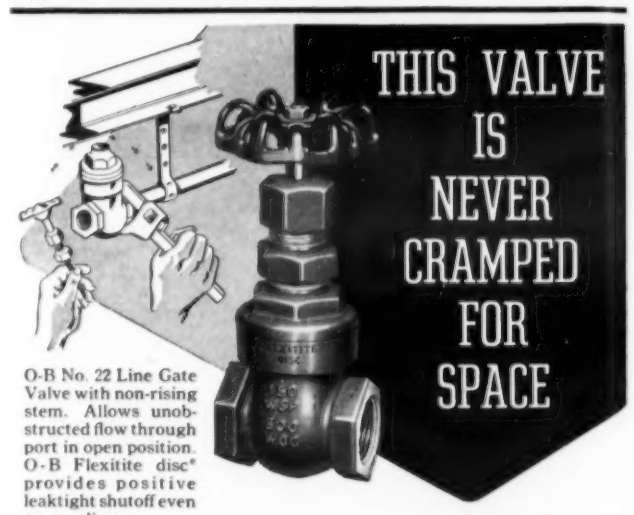
NEW BULLETIN explains fast, economical facilities for producing really small die-cast parts. Write today!

* and we do mean small: MAXIMUM WEIGHT: ½ oz.

Find out about GRC tiny zinc die-castings before you plan another step. Send for latest GRC BULLETIN, which explains, in detail, GRC's exclusive cost-saving technique for quick volume production of quantities ranging from 100,000 parts to many millions. *No limit to smallness.*

GRIES REPRODUCER CORP.
82 Willow Avenue, New York 54, N. Y.

▲ For more details circle **NED-4282** on enclosed inquiry slip ▲



O-B No. 22 Line Gate Valve with non-rising stem. Allows unobstructed flow through port in open position. O-B Flexitite disc* provides positive leaktight shutoff even on gasoline.

O-B gate valves unscrew at the stuffing box to allow easy removal of stem, stuffing box, and packing nut in one piece. With these parts removed, the valve body with disc inside and center piece can be easily threaded to the pipe ends—even in cramped quarters. Available at your Ohio Brass distributor.

OHIO BRASS COMPANY, MANSFIELD, OHIO

* Reg. U. S. Pat. Office. 4042-V

Ohio Brass VALVES

▲ For more details circle **NED-4289** on enclosed inquiry slip ▲

Write for Bulletin P-5.

LIFTS 51 TIMES ITS OWN WEIGHT

. . . with ease. The 2-ton "Packet" saves money, too . . . because its 78 lbs. can be readily moved from job to job.

Costing much less than the average 2-ton hoist, the Peerless "Packet" features: simplified spur gearing and improved friction mechanism; spur gears heat-treated alloy steel, with precision cut teeth; fewer parts; with all rotating parts mounted on prelubricated ball bearings, minimizing the amount of pull necessary to lift full capacity.

The Peerless "Packet" is really an outstanding example of advanced engineering design. Three capacities are available: ½ ton weighs only 50 lbs, and costs $63.00; 1 ton weighs 53 lbs., priced at only $68.00; and the 2-ton weighs 78 lbs., at only $105.00.

HOIST MANUFACTURERS SINCE 1876

THE **HARRINGTON** COMPANY
17TH AND CALLOWHILL STREETS
PHILADELPHIA 30, PA.

▲ For more details circle **NED-4283** on enclosed inquiry slip ▲

• Here's an M&W finish that permits accurate retention of all desirable surface qualities of most metals . . . that adds lasting protection against heat, cold, weather, corrosion, stain and perspiration — Dulac Clear Universal Lacquer #462. It's formulated to give good adhesion with either the spray, dip or brush method. And it fits into fast production schedules because in five to ten minutes this successful general purpose lacquer dries out of dust . . . hardens in one hour. For complete information, write for Technical Data Bulletin 110 or let an M&W technical consultant discuss your requirements privately with you.

PIONEERS IN PROTECTION M&W Co. 1876 . . . *where industry goes with finishing problems*

MAAS & WALDSTEIN COMPANY
Newark 4, N. J. • Chicago 12, Ill. • Los Angeles 24, Calif.
Pacific Coast Division: SMITH-DAVIS CO., 10751 Venice Boulevard, Los Angeles 34
MANUFACTURERS OF INDUSTRIAL FINISHES

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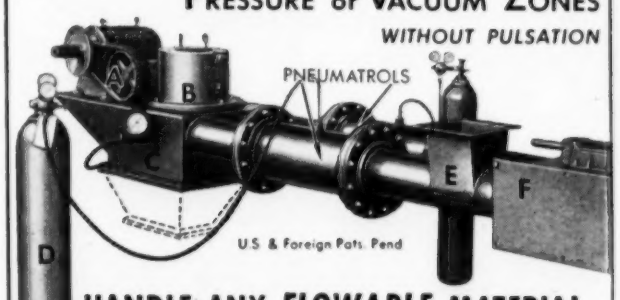
HAPMAN PNEUMATROLS

Now CONVEY CONTINUOUSLY INTO OR OUT OF PRESSURE or VACUUM ZONES WITHOUT PULSATION



HANDLE ANY *FLOWABLE* MATERIAL

This photo shows the testing set-up prior to shipping an installation of a Hapman circular flight chain conveyor equipped with Hapman Pneumatrols. The pressure-sealed Pneumatrols used with the Hapman pressure-tight, chain-link and flight assemblies, make it possible to convey any *flowable* material into or out of vacuum and pressure zones intermittently, continuously or it can be processed in motion through these zones. Complete information on request.

A. Motor and drive. B. Speed reducer. C. Dotted lines indicate position of pressurized hopper in actual installation. D. Tanks supplied air source for actuating Pneumatrols in test set-up. E. Receiving hopper. F. Standard take-up for Hapman chain conveyor.

HAPMAN CONVEYORS, INC. 2405-F W. McNichols Road Detroit 21, Michigan

▲ For more details circle **NED-4290** on enclosed inquiry slip ▲

LMC fabricated aluminum extrusions

ARE READY FOR ASSEMBLY
—we extrude, form, bend, drill and tap, pierce and finish.*

How can you use
LMC *fabricated* aluminum extrusions to help make *your* products better at a saving? Perhaps shapes like those shown here can *work* for *you.*

Tool costs are low
Write today without obligation for our estimates and recommendations

**Alumilite licensee—clear and color anodizing, chemical brightening.*

Shapes That Work

LIGHT METALS CORPORATION
1207 Monroe Avenue, N. W.
GRAND RAPIDS 5, MICHIGAN

For more details circle NED-4291 on enclosed inquiry slip

CONE WHEEL SMOOTHS OUT DIE MARKS 200% FASTER

IN grinding die marks from the inside of pressure tanks, this manufacturer was using straight type 4500 R.P.M. grinders with 6" x 2" x ⅜" vitrified wheels. The wheels cut grooves into the tank on either side of the die marks, causing failures under tests.

When called in, the Rotor Application Engineer recommended 8500 R.P.M. Rotor Air Grinders with 2¾" x 3½" x ⅜" resinoid bond cone wheel, round nose. Result:

Output increased 200% because the round nose cone wheel could be held on the die marks without cutting into the tank wall . . . and because of the faster cutting of the resinoid wheel and the higher speed.

Now the inspector says, "OK," every time.

How about *your* portable tool problems? We'd like to tackle them!

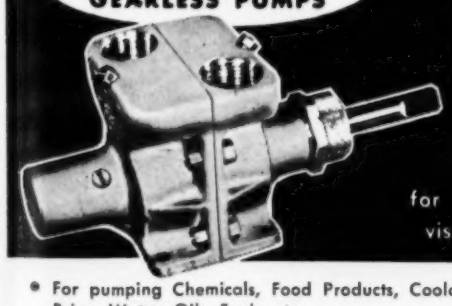
AIR O'TOOL

THE ROTOR TOOL CO.
CLEVELAND, OHIO

For more details circle NED-4292 on enclosed inquiry slip

WORTH INVESTIGATING

ECO GEARLESS PUMPS



AMERICA'S MOST VERSATILE MULTI-PURPOSE PUMP

for liquids and viscous fluids

- For pumping Chemicals, Food Products, Coolants, Beverages, Brine, Water, Oils, Fuels, etc.
- Quiet, smooth running. Bearings require no lubrication.
- Naval Bronze Forgings or Stainless Steel pump bodies last indefinitely, will not corrode.
- Capacity from 5 gph to 15 gpm. For use against pressures up to 150 lbs. per sq. in. Pumps in either direction.
- Four sizes: ¼", ⅜", ½", ¾". Run at speeds from 500 to 2400 rpm. Available in Motor Drive Unit. Also available with By-Pass.
- Ideally adapted for many types of original equipment.
- Dependable, trouble-free performance offers lowest cost per gallon of liquids moved.

SEND FOR ECO PUMP BULLETIN J

Mfrs. of Gearless Pumps for Industrial, Farm, Home & Marine Use.

ECO ENGINEERING CO.
12 New York Avenue • Newark 1, N. J.

For more details circle NED-4293 on enclosed inquiry slip

SHEAR HARDNESS TESTER
measures plastic surface toughness

This model 139 shear hardness and diamond scratch tester accurately measures quality of plastic materials and plastic coated surfaces to resist scratches, digs, scrapes and similar physical damage not classed as normal wear. Both tests are performed with finely balanced scale beam calibrated in grams. To this is attached S-20 or S-30 precision-ground shear contour tool or 139-55 diamond point scratch tool. Sliding weight provides adjustment in load from 0 to 500 grams, and extra calibrated weight is furnished to increase load capacity to 1000 grams. Scale beam is pivoted on precision ball bearings. Gage block can be raised or lowered to correspond with specimen thickness, thus maintaining scale beam in level position whether specimen is thin plate or up to ¼-in. thick. Instrument is housed in walnut finished case. Made by **Taber Instrument Corp.,** 110 Goundry St., North Tonawanda, N. Y.

For more details circle NED-4294 on enclosed inquiry slip

NONSKID FLOOR COATING
is usable on wood, metal or tile

Recommended for coating floors of walk-in freezers, hotel kitchens, pullman car galleys and hospital operating and delivery rooms, Durvin gray A. D. nonskid coating SV-363 provides safe skid-resistant covering. It is not affected by fruit juices, butter, milk and animal or human blood and can be cleaned by brushing or washing. Made by **Maas & Waldstein Co.,** 440 Riverside Ave., Newark 4, N. J.

For more details circle NED-4295 on enclosed inquiry slip

PORTABLE SEISMOGRAPH
can produce up to 25 traces

Deep reflections from all types of subsurface strata are recorded accurately by type PSU-11 miniature seismograph. Waterproof amplifier case shown measures 6 x 13 x 21 in. and weighs approximately 35 lb, while oscillograph weighs 25 lb. Gain is 120 db with no preamplifiers required. Amplifiers are plug-in type and do not require soldering for replacement in field. Oscillograph features 25 traces on 6-in. paper, barrel type electromagnetically damped galvanometers, viewing screen, built-in timing system, paper knife, removable take-up magazine, and governor controlled cranking motor. Made by **Southwestern Industrial Electronic Co.,** Dept. NE-P2, P. O. Box 13058, Houston 19, Tex.

For more details circle NED-4296 on enclosed inquiry slip

Faster Better TIE-MARKING

with PANNIER INSPECTORS HAMMERS

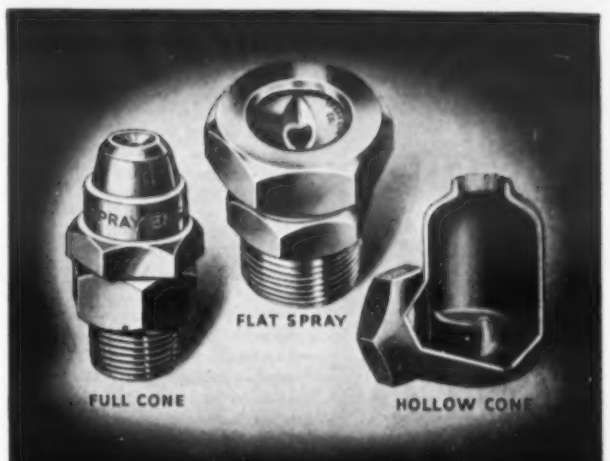
- Hammer head 8" long; machined for good balance
- 18" seasoned wood handle
- Engraved characters on both ends cut ⅛" deep for deeper, more lasting impressions
- Available in standard flat face for crushing end wood fiber; or sharp face for cutting side grain

Pannier Bros., specialists in design, engineering and manufacture of all types of marking equipment, also offer steel inspectors' hammers and a wide variety of dies, stamps, stencils, marking inks and special marking machines to meet any marking problem. Write today for recommendations.

OFFICES
Chicago, Ill.
Los Angeles, Calif.
Youngstown, Ohio
Philadelphia, Pa.
Jacksonville, Fla.

THE PANNIER CORPORATION
301 Pannier Building
Pittsburgh 12, Pa.

For more details circle NED-4297 on enclosed inquiry slip



SPRACO NOZZLES

Write for NOZZLE CATALOG *to*
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.

For more details circle NED-4298 on enclosed inquiry slip

FIRST TIME ON THE MARKET!

CHIPPAFLEX IN COLORS
the flexible corrugated wrap with the "thousands of little cushions"
NOW in WHITE—RED—BLUE—GREEN
for faster handling, safer shipping, easier identification

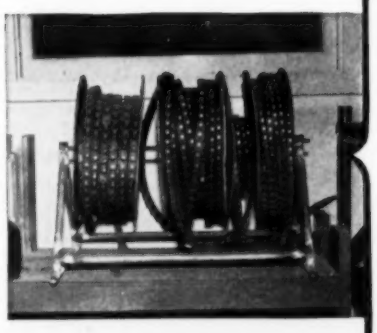
CHIPPAMAILER for speedier packaging:
photographs • catalogs • literature • brochures • blueprints • booklets • drawings • manuscripts

CHIPPACUTTER straight or serrated edge—cuts neatly and cleanly:
corrugated (both single and double face) • linoleum • aluminum foil • rubber matting • flexible corrugated • burlap • gasket material • reinforced waterproof paper • photographic papers • flexible corrugated tubing • building papers • flexible plastics • cellulose wadding material • excelsior pads • artificial leather • fiberboard • felt • insulation • rubber tile • muralboard • heavy chipboard • roofing papers • canvas • paper furniture blankets • almost everything except armor plate!

For The Name Of Your Nearest Chippewa Dealer, Write:

Chippewa
PAPER PRODUCTS CO., INC.
3315 W. 48th Place, Chicago 32, Illinois

For more details circle NED-4299 on enclosed inquiry slip



THESE 4 REELS OF VEELOS ARE *all the v-belt stock*
ONE BIG PLANT REQUIRES
1 REEL OF A
1 REEL OF B
2 REELS OF C

• Just 4 reels of Veelos—the adjustable v-belt—take care of 75 v-belt drives in this plant. Soon all 200 drives will be Veelos equipped! This plant is standardizing on Veelos for good reasons . . .

- *It saves money* on v-belt inventory.
- *It saves money* when belts are replaced.
- *It saves money* because Veelos lasts longer.
- *It saves money* because Veelos gives full, vibrationless, power delivery.

Have you the facts at your fingertips? *Send for your copy of the Veelos Data Book.*

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

VEELOS THE LINK V-BELT

ADJUSTABLE TO ANY LENGTH
ADAPTABLE TO ANY DRIVE

Made in all widths in three types: regular, oil-proof and static conducting. Also double V in A and B. Packaged on reels in 100-foot lengths. Sales engineers in principal cities; over 350 distributors throughout the country. Veelos is known as VEELINK outside the United States.

For more details circle NED-4300 on enclosed inquiry slip

it's a
DRAGLINE CRANE CLAMSHELL BACKHOE
and now...
THE HYSTAWAY
is also a
SHOVEL

HYSTAWAY — 5 tools in 1 — for mounting on all "Caterpillar" D8 and current series D7 track-type tractors (Dragline, Crane and Clamshell also applicable to D6.) On in 2 hours, off in 1.

The Hystaway Shovel Front possesses all of the advantages of a conventional shovel, *plus* full tractor mobility, *plus* an excess of power, *plus* an extremely fast swing, *plus* an unusually long reach.

Hyster's line of 29 tractor tools (including the Hystaway) is sold and serviced by "Caterpillar" distributors everywhere. Current delivery. Write for literature.

HYSTER® COMPANY
2906 N. E. Clackamas, Portland 8, Oregon
1806 North Adams Street, Peoria 1, Illinois
1010-06 Meyers Street, Danville, Illinois

For more details circle **NED-4301** on enclosed inquiry slip

Here's News of Importance to All Quantity Users of Springs

IF you are a user of large quantities of precision springs of any type we have a proposition that may very well result in a substantial reduction in costs for you. All we ask is the opportunity to have our engineers go over your spring requirements. Our experience indicates that the application of our "know-how" and modern facilities can often result in lower costs through improved manufacturing methods. Let us show you what we can do for you. Write today.

ACCURATE SPRING MFG. CO.
3805 W. LAKE ST. • CHICAGO 24, ILL.
Cost Conscious Quality Since 1930

Springs — Accurate Springs — Wire Forms • Stampings

For more details circle **NED-4302** on enclosed inquiry slip

Shredded Paper

IS THE IDEAL PACKING MATERIAL

produce it yourself for . . .

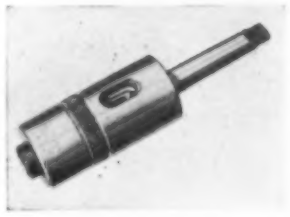
(1) **Real dollar & cents savings**
(2) **Minimum inventories**
(3) **Substantial space savings**
(4) **Dependable supply**

Test a "Silver" paper shredder in your own shop without obligation—Get complete details by writing today to:

INDUSTRIAL SHREDDER & CUTTER CO.
107 Mill Street **Salem, Ohio**

For more details circle **NED-4303** on enclosed inquiry slip

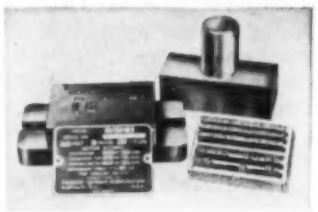
FLOATING TOOL HOLDER
compensates for shaft misalignment



Double gear or spline drive coupling is utilized by JA floating tool holder to give unrestricted parallel or angular float for tapping, reaming and similar operations. Because of its small diameter, tool holder is suitable also for close center and multiple spindle work. It can be obtained in three sizes with Morse taper shanks and collets. Made by **Scully-Jones & Co.,** 1952 S. Rockwell St., Chicago 8, Ill.

For more details circle **NED-4304** on enclosed inquiry slip

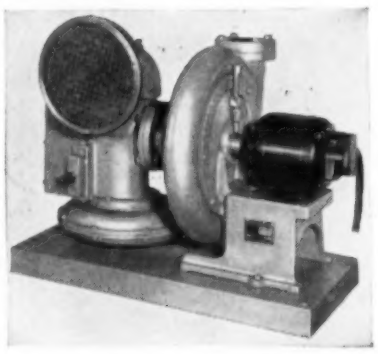
NAME PLATE MARKING FIXTURE
usable for mass production marking



Designed for use in small power, screw or kick press, special stamping fixture consists of chase block which contains steel marking letters and striking block which is held in press throat by set screws. Slots for holding letters are machined out of solid tool steel chase block to suit setup of name plate layout. When same style plate is used for several different models, logotypes are supplied which are engraved to assure perfect alignment and even-depth stamping. Equipped with alignment pins to facilitate setting plate over type, chase block is mounted on press bed by holder section which can be clamped or bolted in position. Made by **M. E. Cunningham Co.,** 151 E. Carson St., Pittsburgh 19, Pa.

For more details circle **NED-4305** on enclosed inquiry slip

FUEL MIXING VALVE
minute adjustments are possible



Accuracy of air-gas mixing and versality are obtained in McKee Consta-Mix proportioning valve by regulating features that permit adjustment of mixture at any point in range of valve capacity and by provision for Btu change as required on special applications. Valve can handle brazing, soldering, flame hardening, small furnace heat or atmosphere gas generating requirements for air-gas regulation. It is suitable for use with manufactured, natural or liquefied petroleum gases. Mixture is compressed by turbo compressor and delivered at constant pressure. Valve can be used with exothermic or endothermic generator or as full premix unit for burner applications. Three models handle 1500, 3000 and 6000 cu ft per hour. Made by **Eclipse Fuel Engineering Co.,** 672 S. Main St., Rockford, Ill.

For more details circle **NED-4306** on enclosed inquiry slip

"WALKS OPEN"
any balky boxcar door

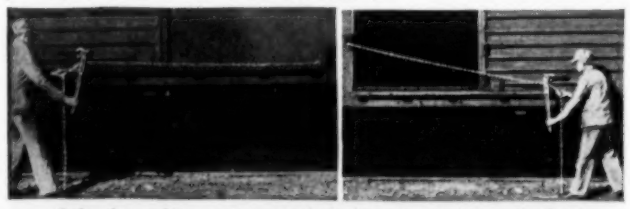
The NOLAN Standard Model S Boxcar Door Opener and Closer saves time, saves life, saves money!

● Here is a light, handy, portable tool that walks any balky door open or shut with ease as though hung on roller bearings. The operation consists simply of working a ratchet handle on a chain.

At every place where boxcars are loaded or unloaded, keep this NOLAN Model S Puller at hand. It may pay for itself on the very first door. It is certain to repay its price in time, labor and worry saved in a week or so. Its years and years of service are all clear profit for you.

Any boxcar door is opened or closed in a jiffy with this 90-second Door Puller. Its average time is 1½ minutes per door, no more. A quick ratcheting movement of the handle gives a 2000 pound pull on the door to where you want it.

$29.50
F.O.B.
Bowerston



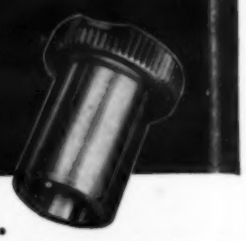
Only six working parts; rugged, fool-proof and dirt-proof. Total weight including its 15-ft. chain, only 21 lbs.—an easy one-hand job to carry and use anywhere. Order one or more now, or write for literature.

THE NOLAN COMPANY 128 PENNSYLVANIA AVE. BOWERSTON, OHIO

For more details circle **NED-4307** on enclosed inquiry slip

SUPERFINISHED I.D.'s of UNIVERSAL DRILL BUSHINGS wear longer save you money

UNIVERSAL ENGINEERING COMPANY



FRANKENMUTH 5, MICH.

For more details circle **NED-4308** on enclosed inquiry slip

Have you a design or production problem involving parts fabricated from woven wire cloth? If you do, why not allow us to be your manufacturing division for such parts. We have a large department specializing in the fabrication and assembly of wire cloth parts in production quantities...we are equipped to manufacture everything from ventilating screens to fuel pump strainers.

We weave our own cloth and do all the necessary cutting, forming, welding, soldering, seaming, bending, edging and fitting. You get your parts complete, ready for quick assembly.

May we quote on your requirements?

6-NWC-5

NEWARK for ACCURACY

Newark Wire Cloth COMPANY
332 VERONA AVENUE • NEWARK 4, NEW JERSEY

For more details circle **NED-4309** on enclosed inquiry slip

How Production-Wise Manufacturers

SAVE SANDING COSTS

GOES FARTHER

Stainless steel "skin" of a modern airliner needs careful sanding before final buffing operation. This steel manufacturer supplying the aircraft industry, found that AP's special heat-resistant Jewel Aluminum Oxide Paper Belts cut faster — *lasted longer* than any previously used abrasive.

"IN ON GROUND FLOOR"

This manufacturer of rubber floor tile needed an abrasive to rough up backing for better adhesion in cementing operation. Tried various abrasives — found AP's fibre-backed Jewel Silicon Carbide out-performed all others. Calls it, "Best we've ever used!"

Whatever your product, chances are you can cut costs — do better work like this — with AP Jewel Abrasives. See your distributor or write us now!

Abrasive Products, Inc.

SOUTH BRAINTREE 85, MASSACHUSETTS • MAKERS OF JEWEL COATED ABRASIVES

▲ For more details circle **NED-4310** on enclosed inquiry slip ▲

Over Half of America's Top Companies Use "Speed Sweep"

THE BRUSH WITH THE STEEL BACK

BECAUSE it sweeps faster and cleaner, and outlasts ordinary brushes 3 to 1, Speed Sweep has become the No. 1 sweeping tool of American Industry — used by over 50,000 firms. Whether you use a few or a lot of brushes, you'll find it pays to switch to Speed Sweep.

Write for styles, sizes and prices.

MILWAUKEE DUSTLESS BRUSH CO.
MILWAUKEE 3, WISCONSIN

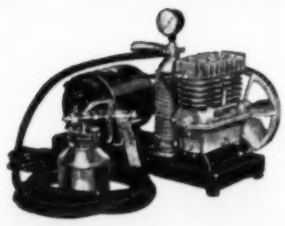
▲ For more details circle **NED-4311** on enclosed inquiry slip ▲

PAINT YOUR PLANT WITH THIS FOUR CYLINDER PORTABLE SPRAY PAINTING OUTFIT

Your own maintenance men can do it faster, cheaper and better with

PRESSURE QUEEN

• The only portable air compressor having four cylinders in the space usually required for a single cylinder. Absolutely no pulsation.



Write for Literature

THE CAMPBELL-HAUSFELD COMPANY
193 RAILROAD AVENUE HARRISON, OHIO

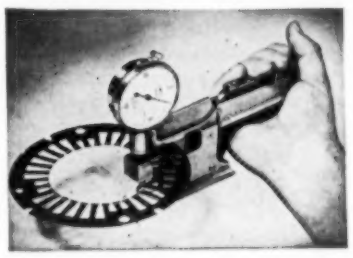
▲ For more details circle **NED-4312** on enclosed inquiry slip ▲

TORQUE WRENCHES cover range from 2 to 36,000 lb-in.

Compactly designed, well balanced JO-Line torque wrenches are usable for production line, critical maintenance, assembly or inspection operations. Tension breaks automatically when proper torque value is reached. Wrenches are available with micrometer adjustment over operating range or preset to any torque value. They can be reset easily to conform with changes in torque specifications. Made by **JO Mfg. Co.**, 8442 Otis St., South Gate 1, Calif.

▲ For more details circle **NED-4313** on enclosed inquiry slip ▲

BURR GAGE prolongs life of punches and dies



Since it accurately measures height of burrs in stampings of all materials, model S-4930 burr gage can be used to determine exactly when punches and dies need grinding. Gage is held vertically by knurled handle and lever squeezed to close two clamping surfaces. Specimen then hangs in gage in vertical position, and actual amount of burr shows on dial in direct readings to 0.0005-in. Made by **B. C. Ames Co.**, 131 Lexington St., Waltham 54, Mass.

▲ For more details circle **NED-4314** on enclosed inquiry slip ▲

WATER-HEATER THERMOSTAT temperature range is 60 to 180° F

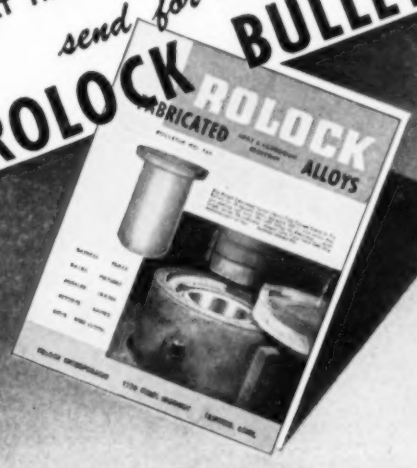
Available in both single-pole single-throw and single-pole double-throw models, this water heater thermostat offers double-break contacts with hammer action. It is rated 6000 w at 240 v ac. Completely protected from damage by opposite polarity, control is precision calibrated with detent lock on scales. Unit weighs 4 oz and measures 5½ x 2¾ in. Brackets are furnished to specifications. Thermostat is listed by Underwriters' Laboratories. Made by **Cam-Stat, Inc.**, Dept. NED-6, 2310 S. La Cienega Blvd., Los Angeles 34, Calif.

▲ For more details circle **NED-4315** on enclosed inquiry slip ▲

HEAT TREAT DEPARTMENTS...

send for new

ROLOCK BULLETIN



Fabricated-welded alloy Pit-Type Furnace Retorts, Drop-bottom Stainless Baskets, Inconel Lift Post and Nitriding Basket assemblies, Muffles, Brazing Trays, Salt Pot Baskets, etc. Save weight, time, heat, atmosphere, rejects . . . with lighter weldments for greatest resistance to exposure, shock, abrasion.

ROLOCK INC., 1412 Kings Highway, Fairfield, Conn.

JOB-ENGINEERED for better work
Easier Operation, Lower Cost

2RL50

▲ For more details circle **NED-4316** on enclosed inquiry slip ▲

NEW...

Extremely sensitive

PRESSURE & VACUUM *Switches*

TYPE SB

The new Type SB pressure and vacuum switches are for use in applications in which close on-off differentials and absolutely consistent maintenance of cut-in and cut-out settings are essential in the control of pressure or vacuum. Available are two pressure models and two vacuum models. The Pressure Switches have adjustable ranges from 0-15 psi and adjustable on-off differential from .1" wc-10" wc. They may be furnished as calibrated, micrometer type or uncalibrated for screw driver adjustment.

Electrical ratings at 125/250 V AC between 1200 watts and pilot duty depending on differential. The Vacuum Switches offer adjustable ranges from 30"-0" hg vac with adjustable on-off differential from .1" wc-10" wc. Furnished as calibrated micrometer type or uncalibrated with screw driver adjustment. Electrical ratings of both models 1200 watts at 125/250 V AC.

UNITED ELECTRIC CONTROLS COMPANY
81 School Street
Watertown, Mass.

Special models available for requirements not included in the specifications above.

Write for new bulletin 4926 P giving complete details today.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle **NED-4317** on enclosed inquiry slip ▲

FRESH AIR

freshens production, too

Remove fumes, excess heat, dust with ILG units

Employees are more comfortable and more efficient when there is proper and adequate ventilation. ILG blowers and fans — distributed by Graybar — are the most efficient, best-built units you can buy. All ILG equipment is built on the "exhaust" principle and designed to provide complete and frequent air change. For each of your ventilating needs, there's a standard unit that's "made for the job."

Free ventilation-planning bulletin!

Here's a new 32-page booklet that's crammed with ventilating information and diagrams. The booklet, "How to Plan Your Ventilation System", describes how to figure air-change requirements for your building; how to select the correct-size fan; how proper ventilation can increase employee productivity; and hundreds of other facts that are important to you and your company. Be sure to get your copy — it's ready now.

Convenient source for everything electrical

Graybar distributes more than 100,000 electrical items for wiring, lighting, communication, power, and all your other electrical needs. Graybar Specialists are on call to help solve difficult problems. *Graybar Electric Company, Inc. Executive offices: Graybar Building, New York 17, N. Y.*

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Send coupon for FREE Booklet

GRAYBAR ELECTRIC CO., INC., Graybar Building, New York 17, N. Y.

Please send me my copy of the 32-page booklet "How to Plan Your Ventilation System."

Name_____ Title_____

Company_____

Address_____

City_____ Zone____ State____

▲ For more details circle **NED-4318** on enclosed inquiry slip ▲

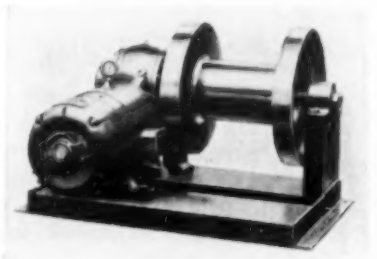
For more details circle NED-4319 on enclosed inquiry slip

HYDRAULIC LIFT ATTACHMENT
extends use of power wheelbarrow

Capable of lifting 500-lb load, manually operated hydraulic lift attachment increases usefulness of Moto-Bug power wheelbarrow (*See NED Aug. '48*) in special handling problems. Forks tilt to rear to assure good load balance and are adjustable to minimum width of 33 in. for clearing narrow aisles and doorways. Wheelbarrow has 10-cu ft hopper body, 1200-lb platform body and riding step. Various front-end attachments can be interchanged easily. Made by **Kwik-Mix Co.**, Dept. NE, Port Washington, Wis.

For more details circle NED-4321 on enclosed inquiry slip

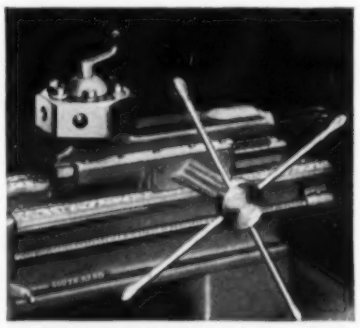
ELECTRIC HOIST
features built-in overload clutch



Suitable for operating merchandise elevators with either one or two platforms, this series 800 electric hoist employs electric brake on motor and built-in clutch on spool which will slip if hoist is overloaded. Five models in series provide capacities from 600 to 3000 lb at hoisting rate of 100 fpm. All models are equipped with 220/440-v three-phase 60-cycle ac motors as standard equipment; while other voltages, hoisting speeds and capacities can be obtained on special order. Units can be installed for pushbutton automatic control. Made by **King Mfg. Corp.**, 3155 W. Chicago Ave., Chicago 22, Ill.

For more details circle NED-4322 on enclosed inquiry slip

LATHE TURRET
is of hand-feed turnstile bed type



Installed on 16-in. swing South Bend lathe, this hand feed turnstile bed turret affords economical production of duplicate precision parts. Turret can be locked in position at any point along usable length of lathe bed, and head can be back-indexed or spun to skip tool positions. Also available are two other accessories for multiple tool repetitive operations. They are square-turret tool block and double tool cross slide for lathe carriage. Made by **South Bend Lathe Works**, 307 E. Madison St., South Bend 22, Ind.

For more details circle NED-4323 on enclosed inquiry slip

ACROMARK MEANS "ACCURATE MARKING"

THE ACROMARKER NAME PLATE AND PARTS STAMPING MACHINE COMES IN SIZES FROM 1/16" TO 3/16"

HAND OPERATED AND FOOT MODELS

NON-TIRING. FAST-MAKES PERFECT STAMPING OF LETTERING & NUMBERING EASY AS DRIVING A CAR

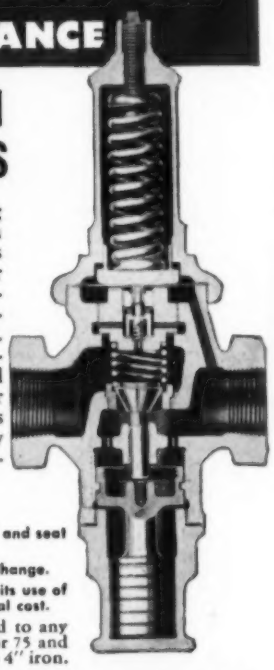
DIE WHEELS AND DIES ARE REPLACEABLE.

The ACROMARK Company
7-11 MORRELL ST., ELIZABETH 4, N. J.
"THE ORIGINAL MARKING SPECIALISTS"

For more details circle NED-4325 on enclosed inquiry slip

YOU PAY NO WITHHOLDING TAX ON PERFORMANCE

with MASONEILAN REDUCING VALVES



Masoneilan No. 11 Reducing Valves give you accurate steam pressure regulation regardless of initial pressure fluctuations or changes in demand. Their performance cuts operating expenses by reducing waste. Their rugged construction assures long operating life and minimizes maintenance. Their on-the-job records in countless plants throughout the country show year after year of continuous service.

CHECK THESE FEATURES—
- Stainless steel main valve, auxiliary valve and seat rings are standard . . . at no extra cost.
- Wide range of adjustment without spring change.
- Large capacity due to pilot operation, permits use of smaller size regulators . . . saves in original cost.

Initial pressures up to 250 lbs. reduced to any desired pressure between 5 and 75 lbs. or 75 and 255 lbs! Sizes ½" to 2" bronze; 2½" to 4" iron.

MASON-NEILAN REGULATOR COMPANY
1189 ADAMS STREET
BOSTON 24, MASSACHUSETTS, U. S. A.

For more details circle NED-4326 on enclosed inquiry slip

TRU-LAY Push-Pull is precision-made. Therefore it . . .

. . . is positive in action as a steel rod, yet flexible as wire rope

. . . transmits action over long or short lengths, with few or many bends

. . . will operate while flexing, with practically no lost motion

. . . is made in capacities up to 1000 pounds input

. . . is designed for long life—a machine part—not a flimsy gadget

MAIL THE COUPON BELOW

(to our Detroit Office) for bulletin of information about TRU-LAY Push-Pull.

6-235 General Motors Bldg., Detroit 2
1119 Santa Fe Avenue, Los Angeles 21
Bridgeport, Conn.

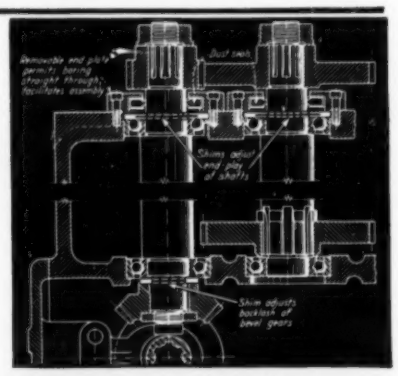
ACCO
AUTOMOTIVE AND AIRCRAFT DIVISION
AMERICAN CHAIN & CABLE

Please send me copy of descriptive bulletin DH-87-D-1.

Name_____
Company Name_____
Address_____
City_____ Zone____ State_____

For more details circle NED-4320 on enclosed inquiry slip

Answer to GEAR MESH and END-PLAY problems



If you're wasting time and tying up a standby lathe . . .

Laminated shims can stop the expensive process of assembly, testing, disassembly, machining a few thousandths, reassembly, retesting and so on for many costly hours.

In the milling machine above, bores for inner and outer bearings are machined to one diameter in one operation. Removable end-plate permits boring straight through outer bearing housing, makes assembly of shaft, bearing and dust seal much simpler. SAVING: hours of machining and assembly time.

Simplify your precision adjustments with LAMINUM shims . . .

Backlash of bevel gear and end-play of the two shafts are adjusted right at the job by peeling .002" laminations off the LAMINUM shims—with just a penknife. Cumulative machining tolerances of —.010 to +.020" are possible.

Send today for our new data file with specifications, design factors and applications. Sample of LAMINUM included.

LAMINUM
THE SOLID SHIM THAT peels FOR ADJUSTMENT

*LAMINUM (Reg. U. S. Pat. Off.) shims are solidly bonded units made up of .002 or .003 inch brass or steel laminations with a microscopic layer of metallic binder. Cut to your exact blueprint specifications.

LAMINATED SHIM COMPANY, Inc.
2306 Union Street Glenbrook, Conn.

SHIMS • SHIM STOCK • STAMPINGS • AN-COR-LOX NUTS

For more details circle NED-4324 on enclosed inquiry slip

NOW for your complete protection
FROM THE WET • GREASE • OILS • ORDINARY ACIDS

TOWER'S FISH BRAND NEOPRENE

TOWER'S protective garments prevent time losses by affording maximum protection from the wet, dampness, spraying and foul weather. TOWER'S new NEOPRENE coated garments give utmost protection by also resisting grease, oil and ordinary acids. There is a TOWER protective garment especially adaptable for every type of industrial activity. We will be glad to recommend the garment which best meets your individual requirements.

For folder of styles and detailed information write Department SF.

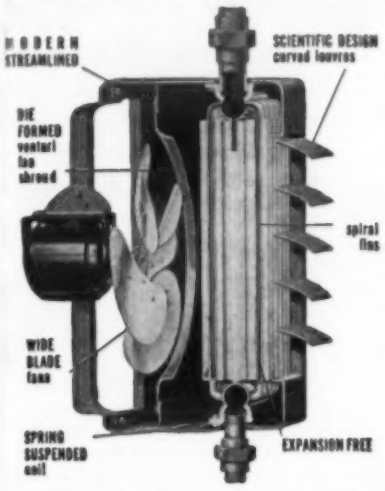
OILED RUBBER

TOWER'S FISH BRAND
A. J. TOWER CO.
24 SIMMONS ST., BOSTON, MASS.
TOWER'S ARROW BRAND

For more details circle NED-4327 on enclosed inquiry slip

UNIT HEATER . . sets new standard of quietness and heating efficiency

McCord Unit Heaters are a time proven product embodying design based on years of experience in the heat transfer field. These units are not only rugged in design and guaranteed for use on #150 p.s.i. steam pressure but are made attractive in appearance. Two outstanding features appeal to maintenance engineers—we use standard motors with standard bases which quickly permits the use of replacement motors should a motor fail in service—the heating element is made of individual spiral fin tubes which are free to expand independently without putting a strain on the brazed joints. The entire heating unit is spring suspended and floats free in the casing, eliminating rigid connections. Improved type fan blades deliver large volumes of air with minimum air noise and vibration which makes these units suitable for office and store use. A complete line of vertical projection type unit heaters and blast coils are also available. Catalog on request or write for new folder. "Instructions for Maintenance of Unit Heaters." **McCord Corporation,** Detroit, Mich. *Advt.*



▲ For more details circle **NED-4328** on enclosed inquiry slip ▲

Now— ONE GREASE will service all grease applications in the majority of plants

SHELL ALVANIA GREASE

Gives all these plant savings:

1. **Extends TIME between greasings**—lasts longer . . . stays in bearings longer.
2. **Low-cost application**—fewer servicings and *only the one grease* to handle.
3. **Simple inventory**—Shell Alvania Grease replaces up to *20* brands formerly required.
4. **Better protection**—against heat, cold and moisture.
5. **Greater safety**—less chance of applying the wrong grease!

Gives all these lubrication advantages:

1. **Higher mechanical stability** than any conventional grease at operating temperatures.
2. **Pumpable at low temperatures**—even in unheated storage.
3. **Stable at high temperatures**—superior to the best "soda" greases.
4. **Impervious to water**—excellent resistance to washing out.
5. **Longer service life**—reduced consumption.

The "MILLION-STROKE" Industrial Grease! A grease that will stand 100,000 punishing strokes of the ASTM Work Tester has been considered a superior lubricant.

In a deliberate attempt to break down Shell Alvania Grease, *on the same tester* the run was extended . . . 200,000 strokes . . . 300,000 strokes . . . 500,000 strokes! Finally, at one million strokes the test was discontinued, because this grease *would not break down*—it was still a fit lubricant both in appearance and consistency.

SHELL OIL COMPANY
50 West 50 Street, New York 20, N. Y.
100 Bush Street, San Francisco 6, California

SHELL

SHELL ALVANIA . . .
The "Million-Stroke" Grease

▲ For more details circle **NED-4329** on enclosed inquiry slip ▲

CARBIDE TIPPED CIRCULAR SAW slots control noise and vibration

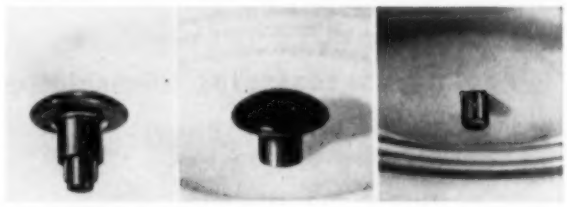
Uneven stresses and strains, objectionable noise and vibration are minimized by slots cut in Vibra-Free carbide tipped circular saw blade and filled with material

having harmonic qualities different from those of steel saw body. Slots are designed so that when material is inserted, it becomes self-locking and therefore safe in use. Since design allows relieving of brazing stresses, it permits use of as many teeth in saw as required without whistle. Made by **W. F. Meyers Co.,** Dept. NED, 19, Bedford, Ind.

▲ For more details circle **NED-4330** on enclosed inquiry slip ▲

PLASTIC COVER LIFTER KNOBS are reinforced by steel inserts

Application of Spring-Lock fastener (*See NED Apr. '45*) is plastic cover lifter knobs made with specially designed heads to harmonize with Easy washing machine cabinets.



Since no nuts, bolts or threadings are required, they are installed quickly. Spring action of fasteners provides tight vibrationfree performance. Plastic construction is reinforced by molded-in steel inserts which provide extra strength at point of load or impact and increase load-carrying capacity of entire assembly. Made by **Simmons Fastener Corp.,** P. O. Box 1230, Albany 1, N. Y.

▲ For more details circle **NED-4331** on enclosed inquiry slip ▲

HEAVY-DUTY HYDRAULIC JACKS available in 1½ to 100-ton capacity

Usable in either vertical or horizontal position with no loss of power, these heavy-duty hydraulic jacks can be obtained in sizes of 1½, 3, 5, 8, 12, 20 and on up to 100 tons. Jack handle must be removed from pump socket in order to open release valve, and needle point release gives safe control over lowering. Top nut and base are pressure-tested malleable iron, and bases are well ribbed to assure firm ground bearing. Models up to 12 tons have telescoping extension screw in piston or ram, and all units are tested to 50 per cent overload. Made by **Star Jack Co.,** 2036 N. 73rd Court, Elmwood Park, Ill.

▲ For more details circle **NED-4332** on enclosed inquiry slip ▲

ARO ELECTRODE DRESSER *does job 5 times faster!*

This new tool is light in weight, powerful, portable . . . used for re-shaping copper electrodes on spot welding machines without removing tips from machines. 1200 r.p.m. cutting speed does job *right—nearly 5 times faster* than former methods! Cutters for No. 1 and No. 2 dome-type electrodes and No. 1 and No. 2 pointed or tapered-type electrodes available from stock; other types on special order. Write for bulletin. See your nearest industrial distributor.

ARO
AIR TOOLS
Also . . . LUBRICATING EQUIPMENT . . . HYDRAULIC EQUIPMENT . . . AIRCRAFT PRODUCTS. . . GREASE FITTINGS

The Aro Equipment Corporation,
Bryan, Ohio
Aro of Canada, Ltd., Toronto, Ont.

▲ For more details circle **NED-4333** on enclosed inquiry slip ▲

Tough yet Gentle

Cambridge WIRE BELTS
Combine Movement with Processing Through Fire or Water

Cambridge Woven Wire Belts shrug off extremes of temperatures, corrosive agents, torsion, strain and wear. They hustle rough, bulky objects through rigorous treating processes, or convey delicate products with maximum safety.

Throughout industry, Cambridge Wire Belts are speeding up operations and cutting costs on nearly every bulk material processing job.

Steel casings being copper brazed on a Cambridge Rod-Reinforced Belt . . . a basic Cambridge design characterized by highest tensile strength, straight belt travel, and operation in temperatures to 2100° F.

Call a Cambridge Field Engineer to help you select the proper mesh, weave, metal or alloy to do your job.

Write for FREE copy of the 130-page, illustrated Cambridge Wire Belt Catalog. It's an education in belt and conveyor design, application, installation.

Cambridge Wire Cloth Co.

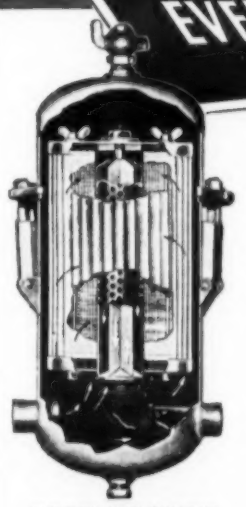
Wire cloth in rolls. | Also specialized wire fabrications

Dept. C
Cambridge 6, Maryland

OFFICES IN PRINCIPAL INDUSTRIAL CITIES
Look Under "Belting, Mechanical" In Your Classified Telephone Directory.

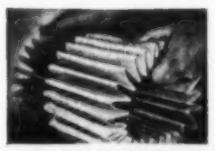
▲ For more details circle **NED-4334** on enclosed inquiry slip ▲

MOST VERSATILE LIQUID FILTER EVER DEVELOPED



MODEL ELS FILTER
(Sectional View)

• **Provides unusual efficiency and economy. *Permits use of any medium that comes in sheet form and can be crimped.* Both first cost and maintenance cost low. Radial Finned Insert provides large filtering area in small space.**



***NEW* SLIP-ON INSERT**
FOR QUICK CHANGE OF MEDIUM
Complete Data on Request

DOLLINGER PROTECTOMOTOR **STAYNEW FILTERS**

DOLLINGER CORPORATION
49 CENTRE PK...ROCHESTER 3, NEW YORK

▲ For more details circle **NED-4335** on enclosed inquiry slip ▲

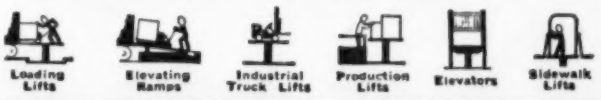
GLOBE Loading Lift

SPEEDS LOADING and UNLOADING

Rugged elevating platform raises materials to truck level, or lowers them to floor level—for faster loading and unloading. Saves costly hand lifting. Eliminates dangerous ramps. Air/oil or motor pump powered. Recesses flush when not in use. Installs anywhere. Quickly pays for itself.

WRITE FOR NEW ILLUSTRATED BULLETIN N650

GLOBE HOIST COMPANY
PHILADELPHIA 18, PA. DES MOINES 6, IOWA



▲ For more details circle **NED-4336** on enclosed inquiry slip ▲

ROUGH! TOUGH! STURDY! for TOP PERFORMANCE

They'll work harder, better, longer for you . . . because Pittsburgh "Lightning Line" *Staple-Set* brushes are built to stand up under rugged punishment.

Precision-made, with uniform quality and finish, these brushes are outstanding for *quick, efficient* maintenance work. PITTSBURGH PLATE GLASS COMPANY, *Brush Division*, Dept. M-4, 3221 Frederick Ave., Baltimore 29, Md.

Your favorite supplier or the "Pittsburgh" Branch nearest you has the complete line!

LOOK FOR THIS SIGN

PITTSBURGH *Lightning Line* BRUSHES

BRUSHES • PAINTS • GLASS • CHEMICALS • PLASTICS

PITTSBURGH PLATE GLASS COMPANY

For more details circle NED-4339 on enclosed inquiry slip

How to be Right the first time

WHEN SELECTING STEAM TRAPS

No single type of trap is suitable for all applications. But one of the four distinct Sarco types will be exactly right for any given application. Some provide quicker warm ups in the morning, some extract more of the heat, some are better for fluctuating condensate loads and others are better for out of doors.

APPLICATION	1st CHOICE	2nd CHOICE
Process Tanks, small	A	C
Process Tanks, large	B	C
Dryers, Coil Type	B	A
Dryers, Fan Type	B	C
Drying Tumblers	B	A
Water Heaters	B	C
Preheaters, Fuel Oil	B	C
Rotating Cylinders	B	B
Slashers	B	B
Dry Cans	B	B
Flat Work Ironers	C	B
Presses, Laundry	C	A
Stocking Forms	C	A
Presses, Plastics	C	A
Presses, Platen	C	A
Evaporators	B	C
Steam Lines Outdoors, small	A	D

*Ask for Technical Bulletin No. 2

A THERMOSTATIC

Wide open when cold for quick starts. Retains more of the heat before releasing condensate. Large valve orifice purges air quickly when starting. No seat changes when pressures change. Cannot freeze. Bulletin No. 250.

B FLOAT

Ball float allows continuous discharge without shock to temperature controls and other instruments. Automatic thermostatic by-pass takes care of air and gases without steam waste. All pressures up to 200 psi. Bulletin No. 450.

C BUCKET

Intermittent, but very rapid—can handle large volumes of condensate. Air goes out with the condensate. All parts attached to cover provide easy inspection. Straight-through connection makes installation easy. Integral strainer inside. Bulletin No. 350.

D LIQUID EXPANSION

A low cost combination of trapping and approximate temperature control. Ideal for outdoor tanks and lines and other points where condensate cannot be returned. In other forms, used as combination trap and control for wash tanks, food equipment, etc. Catalog Nos. 250 and 550.

267

SARCO SAVES STEAM

SARCO COMPANY, INC.
Represented in Principal Cities
Empire State Building, New York 1, N.Y.
SARCO CANADA, LTD., TORONTO 5, ONTARIO

IMPROVES PRODUCT QUALITY AND OUTPUT

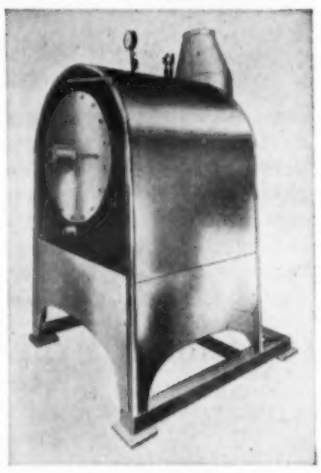
For more details circle NED-4340 on enclosed inquiry slip

ILLUMINATOR & VIEWER usable with color measuring unit

Designed to facilitate use of Color-Eye color measuring equipment (*See NED July '48*), universal illuminator and viewer simulates in controlled manner hand action of human color matcher in orienting samples relative to source and angle of viewing. It permits complete goniometric studies of all types of colored industrial materials to determine effects of angles of illumination and viewing on apparent color. For measurement of difficult materials such as textured or pile fabrics, spinning of samples can be combined with angular adjustments. When combined with computing photoelectric system of Color-Eye, instrument provides realistic simulation of human observer plus numerical evaluation of color difference. Made by **Instrument Development Laboratories, Inc.**, 165 Highland Ave., Needham Heights 94, Mass.

For more details circle NED-4341 on enclosed inquiry slip

CONTINUOUS EVAPORATOR rapidly concentrates thin solutions



Materials which have tendency to foul heated surfaces or develop operational hazards can be rapidly concentrated by Stabilizer nonfouling evaporator. It can be used also to bring concentrated syrups to higher degrees of concentration. Body of unit is insulated steel jacket built to withstand operating steam pressure from 75 to 100 psig. Inner wall is horizontal cylinder against which rotor arm is carried on centrally located shaft driven at low speed. Short treatment time permits retention of heat-sensitive components of materials being handled without damage. Unit is available in six sizes with evaporation rate from 600 to 12,000 lb per hour. It is supplied with liquid contact points of mild, stainless or copper-bearing steel. Made by **Bowen Engineering, Inc.**, 101 Station Ave., North Branch, N. J.

For more details circle NED-4342 on enclosed inquiry slip

DO YOU KNOW? Rusted steel sheets can be restored to usable condition by new service which consists of cleaning, pickling and oiling sheets. Offered by Louisville Metal Treating Service, 2787 S. Floyd St., Louisville 13, Ky.

For more details circle NED-4343 on enclosed inquiry slip

FLOOR SPACE REDUCED 50% IN ASSEMBLY PARTS STOREROOM

Replacing old storage with modern equipment, an Ohio corporation made important savings. Floor space was reduced from 1760 to 900 square feet; shelving height was reduced from 12 to 7 feet, without loss of storage capacity. Aisles were wider and better lighted. One man can now do the work instead of two.

Rotabins increase space utilization because every square foot of storage has aisle frontage when needed. Each tray rotates easily on ball-thrust bearings; will not sag or bind when fully or unequally loaded. These rotary units are flexible and may be combined with straight shelving as desired. A wide variety of tray and drawer arrangements are available to meet specific requirements.

Rotabins are made in many standard sizes to suit a wide variety of needs. Trays rotate around a heavy tubular steel stem secured to a solid circular metal base. Rotabins are durable, portable; require no bracing or fastening. Standard finish is olive green enamel, baked on.

Savings realized from the use of Rotabins can quickly pay for entire investment. Let F-G-M engineers help you plan most profitable layout. Write, phone or wire your requirements.

Send for illustrated Catalog No. 106-A

The FRICK-GALLAGHER MFG. CO.
Shelving—Parts Bins—Racks—Counters—Tables—Benches
408 Shubert Building Philadelphia 2, Pa.

For more details circle NED-4344 on enclosed inquiry slip

Counts to 10,000 Turns per Minute

Clipper Coil Winding COUNTER
also ideal for other high speed Revolution Counting

Brings counter *close to coil* for *precision winding at high speed.* Subtracts turns removed. Quick, one-motion reset. Gears hobbed on own shafts. Extremely long life. Many other features. Prompt shipment. Thousands in use. Send for Catalog or order sample on approval.

Production Instrument Company
700-12 W. JACKSON BLVD., CHICAGO 6, ILL.
Representatives in Principal Cities

For more details circle NED-4345 on enclosed inquiry slip

CUT AIR HOSE COSTS
SPEED UP PRODUCTION
PREVENT ACCIDENTS
SAVE TIME

with CHAMPION

AIR HOSE REELS

Even if you disregard the increased production, the savings in time afforded workers . . . Champion Air Hose Reels still more than pay for themselves in reduced air hose replacement costs and in greater safety. They keep air hose off-the-floor, out-of-the-way, yet always convenient—instantly accessible. They're fully described in the free Champion Catalog!

for ceilings walls and floors

Specify CHAMPION AIR COMPRESSORS
. . . for 21 Features that CUT COSTS!

Endurance, performance and economy are the qualities you want in an air compressor. When you compare the materials, workmanship and the sound practical design of the Champion Line—you'll agree that the Champion can't be beat! The free Champion Catalog shows you 21 outstanding EXTRA FEATURES found in every Champion Air Compressor—write for your copy TODAY!

The model OE-40-60 Two Stage Compressor shown is one of the 54 Champion Models available from ¼ to 7½ H.P.

CHAMPION PNEUMATIC MACHINERY CO.
837 NORTH PLEASANT STREET
PRINCETON, ILL.

CHAMPION

5124 NED

For more details circle NED-4346 on enclosed inquiry slip

HALVE YOUR ENGINE WEIGHT WITH THIS

2 horsepower
23 pound
Model 300

Super Smooth "Twin"

● Give 'em something new to talk about! — Pare weight, streamline your design with Power Products' latest — a 2 h.p., 2-cycle gasoline engine only half the weight of any engine anywhere near it in power or performance.

Available in both horizontal and vertical models

Built rugged, it is easy-starting, extremely tiltable (up to 45° without stalling), and its twin opposed cylinders smooth vibration to a minimum.

We adapt our engines to fit your products

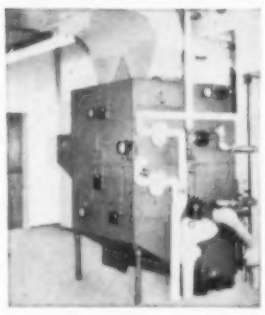
Power Products engineers have worked out adaptations for many different kinds of equipment. Let them show you how your products, too will gain in portability, appearance and saleability with this amazing 23-lb. "two-horse." . . . Just ask

POWER PRODUCTS CORPORATION
GRAFTON 7, WISCONSIN

For more details circle NED-4347 on enclosed inquiry slip

New Method Gives Precise Control in Air Conditioning

NIAGARA "Controlled Humidity Method" Uses HYGROL, Hygienic Liquid Absorbent



● This new method gives complete control of temperature and relative humidity, holding constant conditions or varying them at the will of the user. Especially, it provides dry air at normal atmospheric temperatures with little or no refrigeration required.

The air is filtered and then enters a chamber where it passes thru a spray of "Hygrol" Liquid (a hygienic hygroscopic chemical that absorbs the air-borne moisture and contains no salts or solids to precipitate). In the same chamber, cooling coils remove the latent heat of evaporation and also sensible heat as required.

The absorbent liquid spray falls into a tank at the base. It is piped to a concentrator, removing moisture taken from the air. The re-concentrated liquid returns to the system. This process is continuous, and the apparatus operates always at full capacity.

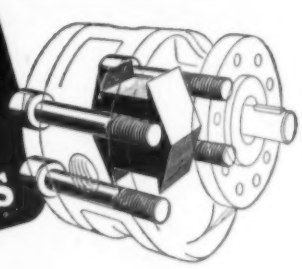
This equipment is manufactured in units providing from 1000 to 20,000 CFM of conditioned air.

Installations have been made in food and chemical process industries, in packaging hygroscopic products, for preventing condensation of moisture on metals and other products in storage, in air conditioning for laboratory control and for human comfort.

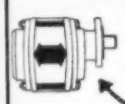
For further information, write Niagara Blower Co., Dept. ED, 405 Lexington Ave., New York 17, N. Y.

▲ For more details circle **NED-4348** on enclosed inquiry slip ▲

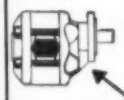
Investigate HYDRECO Four Bolt PUMPS



IN THE OLD DESIGN...



of gear pump assembly, housing parts of the pump are assembled by means of numerous bolts or studs located near the outside of the housing. There is little support in the pressure area. Housing parts and wear plates distort —uneven wear results and pumps quickly lose volumetric efficiency.



HYDRECO FOUR-BOLT DESIGN...

locates the assembly bolts close within the area of greatest internal pressure—insuring rigidity and stability in design that cannot be equalled. Closer internal clearances are permanently built into the pump. There are no complicated internal mechanisms to "foul-up" from dirty oil.

Four Bolt PUMPS — now available in many capacities and mountings.

HYDRECO HYDRAULIC CONTROL DEVICES PUMPS·CYLINDERS·VALVES

Write for catalog and full information

HYDRAULIC EQUIPMENT COMPANY
1108 EAST 222nd STREET • CLEVELAND 17, OHIO

▲ For more details circle **NED-4349** on enclosed inquiry slip ▲

From Stock
LINK-BELT BABBITTED BEARINGS

Link-Belt offers a complete line with a wide selection of all types of solid and split bearings, grease lubricated and ring-oiling, for light or heavy operation.

The economy, simplicity and dependability of babbitted bearings for many industrial applications have been firmly established through many years of service. Send for Catalogs.

LINK-BELT COMPANY 11,787

Chicago 8, Kansas City 8, Mo., Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8. Offices, Factory Branch Stores and Distributors in Principal Cities.

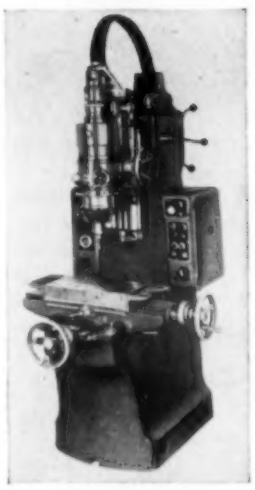
▲ For more details circle **NED-4350** on enclosed inquiry slip ▲

INDUCTION HEATER is 10-kw high frequency type

On 100 per cent duty cycle basis, this type LI-10 induction heating unit is capable of providing more than 10 kw for suitable load. Single and two-station models are available with high and low impedance terminals at each station. Input power is 230/460-v three-phase 60-cycle current. Filament voltages are automatically regulated by constant voltage type transformers. Oscillator tube is air cooled, and make-up type temperature controlled water system cools tank components and work coils. This system features water storage tank, built-in centrifugal pump and temperature control. Made by **Lindberg Engineering Co.,** High Frequency Heating Div., 2444 W. Hubbard St., Chicago 12, Ill.

▲ For more details circle **NED-4351** on enclosed inquiry slip ▲

JIG GRINDER speed range is 12,000 to 60,000 rpm



Accurate relocation and grinding of straight and tapered holes as well as regular or irregular contours is afforded by model No. 2 jig grinder. Angular and indexing device built into main spindle and slot grinding attachment permit accurate grinding of any contour consisting of radii and tangents. High spindle power and infinite feeds up or down make possible form grinding of die sections and chop grinding of contours.

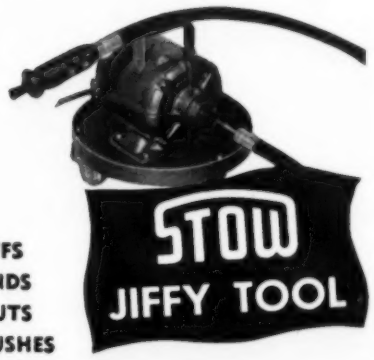
Table size is 10 x 19 in., table movement is 10½ x 16½ in. and distance from table top to wheel collet is 0 to 16 in. Spindle speeds are 4, 85, 170, 255 and 350 rpm. Spindle feeds by air powered hydraulic control are infinite from 0 to 120 strokes. Standard equipment includes four-speed constant-torque motor which operates on 220-440-v 50/60 cycle two or three-phase current, wheel dresser, micrometer stop, wrenches and slot grinding attachment. Made by **Moore Special Tool Co.,** 721 Union Ave., Bridgeport 7, Conn.

▲ For more details circle **NED-4352** on enclosed inquiry slip ▲

DO YOU KNOW? The fourth National Materials Handling Exposition will be held at the International Amphitheater in Chicago, April 30 to May 4, 1951. It will be staged as a combination indoor display and outdoor exhibition of the latest in materials handling equipment and techniques. Concurrently, a conference will be conducted by nationally known experts on materials handling. For information, write to Clapp & Poliak, Inc., 341 Madison Ave., New York, N. Y.

▲ For more details circle **NED-4353** on enclosed inquiry slip ▲

STOW presents a NEW portable POWER TOOL



STOW JIFFY TOOL

- GRINDS
- FILES
- DRILLS
- POLISHES
- BUFFS
- SANDS
- ROUTS
- BRUSHES

$57.40 *For more exacting requirements, the STOW 3-SPEED JIFFY does all the above jobs. SPEED RANGE: 1000-1750-3000 R.P.M.*

Yes, the Stow Jiffy Tool does **all** these jobs . . . at a constant 1750 R.P.M. And this new portable machine is priced so low that no tool room, garage or shop need do without one!

Order Today $44.90

Write Today for Literature on STOW JIFFY TOOLS!

STOW MANUFACTURING CO.
26 Shear St. Binghamton, N. Y.

▲ For more details circle **NED-4354** on enclosed inquiry slip ▲

cut costs on every cleaning job with

cold steam

✓ no back splash
✓ blasts stubborn dirt
✓ harmless to finest finish

HYDRO-AIR PRESSURE WASHER $9.95

Connects to regular air and hot or cold water supply. Precise control of air and water blasts heavy dirt and grease or rinses sheets and small parts with a penetrating spray. Especially effective for metal and food processing, maintenance and repair, degreasing and paint stripping departments.

Order through your supplier or direct. Washer will be sent post paid

D & M Products, Inc., 439 S. Western Ave., Los Angeles 5, Calif.

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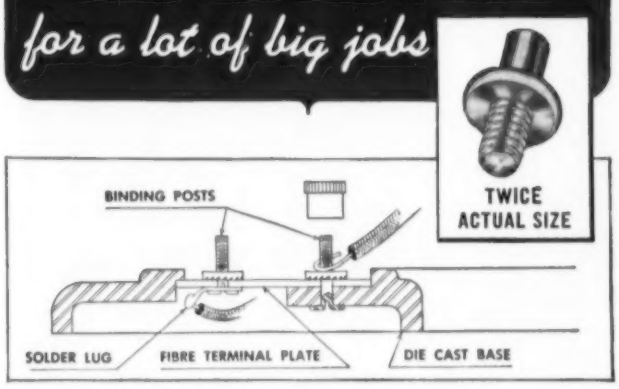
ONE LITTLE PART
for a lot of big jobs



Lionel designed this non-turning, self-fastening binding post for making electrical connections to model railroad equipment, such as coal loaders. A multi-purpose fastener for a high quality product, it must be prefabricated with precision, speed and economy. Progressive provides the perfect facilities for specials such as this.

A combination tubular rivet and threaded post, the connector eliminates separate parts such as nuts and lock-washers, excludes expensive hand operations and permits multiple assembly. Made of headed stock, it curls without cracking. Serrations lock the post to keep it from turning. Tubular section holds the post to its base and may be used further to hold a soldering lug, etc. Drawing detail above shows the multiple functions performed by the fastener.

Special fasteners are our specialty. IF IT'S SPECIAL, see PROGRESSIVE.

WRITE FOR OUR CATALOG
IT MAY SAVE YOU MONEY

Other typical PROGRESSIVE *"Specials"*

QUALITY PROMCO BRAND

THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

SALES OFFICES: SAN FRANCISCO, LOS ANGELES, PORTLAND, DETROIT, PHILADELPHIA, CLEVELAND, SEATTLE, BOSTON, SYRACUSE, ST. LOUIS, CHICAGO.

▲ For more details circle **NED-4356** on enclosed inquiry slip ▲

KERRIGAN Weldforged GRATING
TRADEMARK

Write for illustrated catalog and name of nearest agent

The Weldforged GRATING DIVISION
of KERRIGAN IRON WORKS, INC., NASHVILLE, TENNESSEE
GENERAL SALES OFFICE, 274 MADISON AVE., N. Y. C.

▲ For more details circle NED-4357 on enclosed inquiry slip ▲

Gain Space

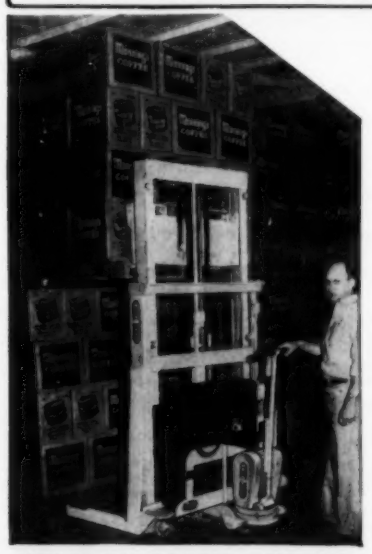
STACK MATERIALS UP TO CEILING, REDUCE AISLE SPACE *by using the*

MOTO-TRUC

Up to 15" SHORTER *in Overall Length*

TURNS IN SMALLER RADIUS

EASIER TO OPERATE. *Controls in Roller Handle*



The Moto-Telescopic Motorized, Battery Operated Hi-Lift Truck has a capacity of 4,000 pounds, 80" lift; 2,000 pounds up to 144" lift.

Power cost is amazingly low—as little as 8c per 8-hr. day.

Four-wheel load support insures safety.

Patented articulating hinged spring unit holds drive wheel down on floor for better traction.

MOTO-TELESCOPIC HI-LIFT TRUCK

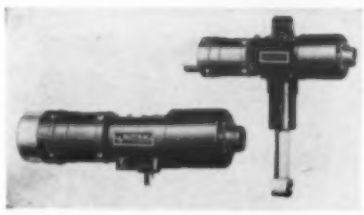
WRITE FOR LITERATURE

HI-LIFT, PALLET, PLATFORM TRUCKS

The MOTO-TRUC Co.
1953 E. 59th Street
CLEVELAND 3, OHIO.
ORIGINATORS OF MOTORIZED HAND TRUCKS

▲ For more details circle NED-4358 on enclosed inquiry slip ▲

ROTARY & LINEAR ACTUATORS operate on alternating current



In addition to models originally designed for low-voltage direct current operation (*see NED Jan. '50*), Rotorac and Lineator electric rotary and linear actuators are now available in types to operate on 110-v 60-cycle single-phase ac. Actuators are recommended for use wherever flexibility of electrically controlled device is required to generate thrust. Installation, dimensions and performance of new models are substantially same as direct current models. Made by **Airborne Accessories Corp.**, 25A Montgomery St., Hillside 5, N. J.

▲ For more details circle NED-4359 on enclosed inquiry slip ▲

ELECTRIC MELTING FURNACE has built-in thermostatic control

Thermostatic control of this Saeco electric melting furnace automatically maintains temperature within plus or minus 20° F of any given setting from 450° to 850° F. It is intended for laboratory, shop and industrial use with lead, lead alloys or other metals that have melting points within its range. Materials are discharged into mold or other receptacle through spout located in base of pot. Ingot mold furnished with unit will cast four ingots, and furnace is large enough to accept standard 5-lb lead ingots without cutting or prior melting. It operates on 110-115-v ac or dc and consumes 1000 w. Made by **Santa Anita Engineering Co.**, 2435-B E. Colorado St., Pasadena 1, Calif.

▲ For more details circle NED-4360 on enclosed inquiry slip ▲

MOTORLESS SPRAYER is portable self-pressurizing unit

Paints, disinfectants and other liquids can be sprayed anywhere by NoMotor self-contained sprayer which operates without motor, compressor or electric power. It consists of 2½-qt steel container with clamp-on lid tested up to 150-psi pressure but requiring only 70 psi for use. Lid holds hand pump used to produce pressure, pressure gage, air release valve and length of paint-resistant synthetic rubber hose which leads to 7-oz spray gun. Unit is recommended for painting shingles, shakes, brick, stucco, concrete and fences. Made by **NoMotor Corp.**, Traction Bldg., Cincinnati 2, O.

▲ For more details circle NED-4361 on enclosed inquiry slip ▲

Stanzoils
Hot 'n Cold
Neoprene Coated Gloves

Work Comfort in Temperature Extremes from −85° to +314°F.

This Stanzoil Hot 'n Cold Glove is designed expressly for use in industry where liquid-tight hand protection in extremely high and extremely low temperatures is required. Several insulating layers of fleecy material are coated with bright red DuPont milled neoprene that resists damage from oils, acids and caustics.

Tests on this glove show that work is possible in liquids at temperatures of 85° below zero and 314° above zero, Fahrenheit scale. Laboratory workers hands were comfortable after a half hour's immersion in a liquid whose temperature was 12°F.

For more information, complete catalog and prices write us. Refer to Stanzoil No. R-28. *The Pioneer Rubber Company, 634 Tiffin Road, Willard, Ohio, Los Angeles 4, California.*

STANZOIL PIONEER

OVER 30 Years OF QUALITY GLOVE MAKING

▲ For more details circle NED-4362 on enclosed inquiry slip ▲

SAFEWAY . . . a new and rugged light weight chain hoist

Designed to keep pace with today's demands for greater efficiency in materials handling, this new Wright hoist is light in weight, high speed, compact, strong, easy to service, long lived. Capacities from ½ to 4 tons. Load chains of steel—heat treated—proof-tested—have high wearing qualities and high safety factor against possible impact loads. Weldments of projection type. Load wheel reversible. Weston type brake resistant to high temperatures; cold, wet and dusty atmosphere. Send for bulletin DH-164.

WRIGHT HOIST DIVISION
American Chain & Cable
York, Pa.

▲ For more details circle NED-4363 on enclosed inquiry slip ▲

SHAKEPROOF
thread-cutting screws

ACTUALLY CUT THEIR OWN THREADS IN DIE-CAST MATERIALS!

Because their exclusive off-center, wide slot presents an acute serrated cutting edge to the work, Shakeproof Type 23 Screws are ideally suited for use in die-castings and in metals which tend to powder when driven. With exceptional free-cutting action, they produce a standard machine screw thread and completely eliminate separate tapping operations.

send for FREE sample kit No. 10

Try these screws! Prove to yourself their time and money saving advantages. Write today!

SHAKEPROOF inc.
DIVISION OF ILLINOIS TOOL WORKS
2501 North Keeler Ave., Chicago 39, Ill.

▲ For more details circle NED-4364 on enclosed inquiry slip ▲

THE BROOM WITH OVERDRIVE

Fuller Fiber Brooms Give You Three Times the Mileage

The true value of a broom is measured by much more than first cost alone. For example, a Fuller Fiber Broom outwears ordinary brooms 3 to 1. *You get three times the mileage.* We invite you to compare the wearing qualities of the Fuller Fiber Broom with any other broom under any sweeping conditions. We believe a test will convince you that, dollar for dollar, Fuller is your best buy. Prove it to yourself. Call your Fuller Industrial Representative today.

Fuller

SHIPPED FROM NINE DISTRIBUTION POINTS

INDUSTRIAL DIVISION
The FULLER BRUSH Co.
3530 MAIN STREET • HARTFORD 2, CONN
IN CANADA: FULLER BRUSH COMPANY, LTD., HAMILTON, ONT.

▲ For more details circle NED-4365 on enclosed inquiry slip ▲

KLIXON THERMOSNAP SWITCHES

Provide Accurate Temperature Control

Klixon C4370 *fixed temperature* Thermosnap Switches give accurate temperature control in such equipment as space heaters, sterilizers, electrical appliances, small water heaters, unit heaters and other products.

Klixon Thermosnap Switches can be supplied in various temperature differentials in settings from minus 10° to 550°F.

Klixon Type C4370 Controls are listed by Underwriters' Laboratories for use where proper terminal enclosure is provided. This eliminates further testing of the thermostat when applied to products requiring Underwriters' listing.

Write for complete information today.

KLIXON
SPENCER THERMOSTAT
Division of Metals & Controls Corporation
1906 FOREST STREET, ATTLEBORO, MASS.

▲ For more details circle **NED-4366** on enclosed inquiry slip ▲

FOR ON-THE-SPOT HEATING OF SOLID OILS, TARS, GREASES, ETC.

CHROMALOX Immersion Heaters are especially designed for portable use in drums and tanks. They give the temperatures needed for efficiently melting coconut oils, lard, tar and similar viscous fluids. When put into drums the Heaters melt their way through contents without tilting. Units can easily be moved from one drum or tank to another. Ratings: 1100 to 4400-watts.

Want More Details?
Send for the free booklet "100 Ways to Apply Electric Heat" which illustrates Chromalox Heaters "at work."

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other advertisement on page 4.

CHROMALOX IB-98

ELECTRIC HEAT FOR MODERN INDUSTRY

▲ For more details circle **NED-4367** on enclosed inquiry slip ▲

SPRAYING SYSTEMS

Spray Nozzles

used everywhere in industry for BETTER SPRAYING at LOWER COST.....

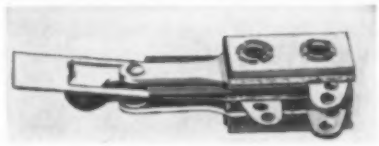
Spraying Systems Co. engineered spray nozzles are cutting production costs everywhere in industry . . . by providing better spray nozzle performance and resultant better processing or equipment operation. Get the facts today by writing for General Catalog 22, or Pneumatic Atomizing Catalog 23.

SPRAYING SYSTEMS CO.
Engineers and Manufacturers
3211 RANDOLPH ST. • BELLWOOD, ILLINOIS
Suburb of Chicago

▲ For more details circle **NED-4368** on enclosed inquiry slip ▲

SMALL SNAP SWITCH

can be used in limited space



Standard Econo-Snap switch has approximately 2-in. overall length, and Midget size is less than 1½ in. long. Both types can be mounted in multiples either horizontally or vertically. Rated at 15 amp 125 v ac, switch can be supplied as normally open, normally closed or double throw type with standard beryllium copper rolling spring construction. Stainless steel and phosphor bronze are used for leaf actuators. Applications include recording and program clocks, timing devices requiring relays, vending machines, household appliances and many types of industrial equipment. Made by **Acro Switch Co.**, Dept. NED, 2040 E. Main St., Columbus, O.

▲ For more details circle **NED-4369** on enclosed inquiry slip ▲

GEAR-TYPE TUBE BENDERS

form any angle up to 180 degrees

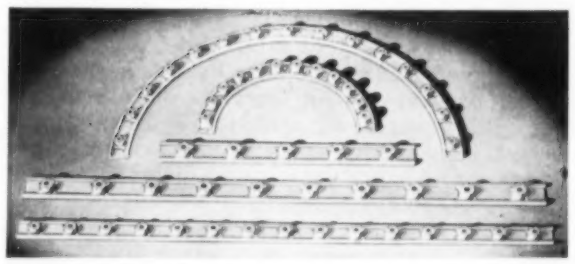
Designed for use with copper, brass, aluminum or steel tubing, these gear-type tube benders can be positioned at any point on tubing without disassembly. They can be furnished as individual units for ½, ⅝, ¾, ⅞ and 1⅛-in. OD tube sizes or as combination benders that will take several nominal sizes. Of open side type, benders can be slipped over tubing at exact point bend is desired and held in hand or clamped in vise. Extension handles are provided for sizes ¾-in. OD and larger; while on 1⅛-in. size, handle is designed for clamping in pipe vise. Made by **Imperial Brass Mfg. Co.**, 510 S. Racine Ave., Chicago 7, Ill.

▲ For more details circle **NED-4370** on enclosed inquiry slip ▲

GANG CHANNEL NUT STRIPS

speed multiunit nut installations

Blue anodized high strength aluminum alloy gang channel nut strips can be used to provide permanent fasteners for access covers, panels and other equipment subject to repeated removal and replacement. Cut and raised dimpling retains nuts securely and prevents over-riding. Nylon locking insert in nuts assures reusability for more than 100 applications. It protects fastenings against vibration, impact and shock and keeps threads rustfree. Made by **Elastic Stop Nut Corp. of America**, 2330 Vauxhall Rd., Union, N. J.



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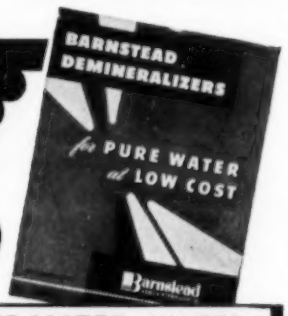
THIS CATALOG GIVES THE ANSWERS

DISTILLED WATER?



DEMINERALIZED WATER?

In hundreds of manufacturing processes, where complete purity is needed, Barnstead Stills provide the highest-quality, lowest-cost, chemically pure, sterile water from ½ to 1000 gallons per hour. With over 100 different models to choose from, Barnstead can provide the exact still to fit your particular needs. For Barnstead Laboratory and Industrial stills are the proven standard of the scientific and industrial world.

FREE

Catalog #123 gives both sides of the Pure Water Picture. Since Barnstead makes both stills and demineralizers, you'll find this catalog complete, authoritative, unbiased. Write Today!

Where modern manufacturing processes require only high-test mineral-free water, Barnstead Demineralizers are the best producers . . . 5c per 1000 gallons with a minimum of supervision and maintenance. Many new industries are turning to Barnstead Demineralized Water for greater production, fewer rejects and better quality control.

First in Pure Water since 1878

Barnstead STILL & STERILIZER CO.

16 Lanesville Terrace, Forest Hills, Boston 31, Mass.

▲ For more details circle **NED-4372** on enclosed inquiry slip ▲

KUSHION-TORK

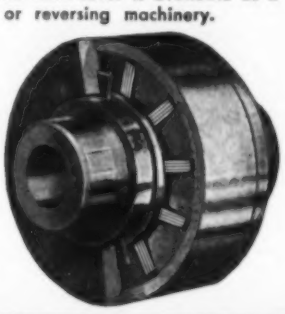
WHAT IT WILL DO FOR YOU

The Cushion Torque of Kanti-Lever Couplings absorbs the hammer blows of sudden or reversing loads and dampens the torsional and radial vibration that cause wear, fatigue and sometimes failure of Motors, Speed Reducers, Ball Bearings, and productive machinery. No other coupling is like the Kanti-Lever: It has a circular series of laminated Cantilevers of 200,000 lb. steel, operating in slots, the tapered sides of which automatically stiffen the Cantilevers under increased overloads. Special end-play up to four inches is possible without end thrust. The outer periphery of the Kanti-Lever is available as a brake drum for quick-stopping or reversing machinery. Send for Bulletin No. 28-D.

Kanti-Lever Couplings

4,000,000 h. p. in Use

MFGRS. OF SECTIONAL STOCK RACKS



BROWN ENGINEERING CO.
129 N. THIRD ST. READING, PENNA.
RACKS • VISES • CLUTCHES • COUPLINGS

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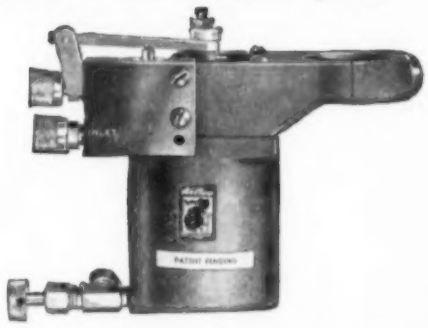
DOUBLE YOUR DRILL PRESS OUTPUT FOR $30

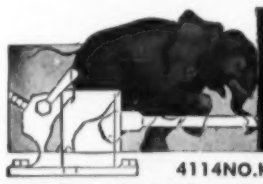


USE A NEW MEAD PNEUMATIC DRILL PRESS FEED FOR DRILLING REAMING TAPPING

This simple, inexpensive device quickly converts standard drill presses into semi-automatic machines — increases production substantially on suitable jobs: double or more in some cases.

Clamps to spindle quill in a few seconds. Automatically closes air fixture on work. Adjustable feed control and break-through cushion. Quick return. Easy to synchronize with automatic cycle equipment.

Air-Power does it quicker, cleaner, better. Write today for latest complete catalog.



MEAD SPECIALTIES COMPANY
4114 NO. KNOX AVE., DEPT. NA-60, CHICAGO 41, ILL.

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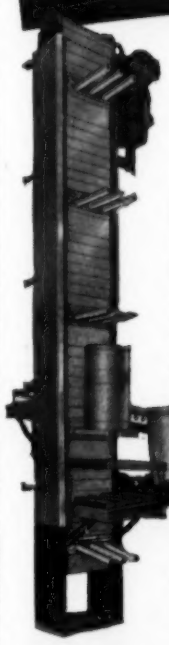
UP PRODUCTION EFFICIENCY . . . PULL UNIT COSTS DOWN



EXCLUSIVE WITH

STEEL-PARTS

STEEL BELT ELEVATING CONVEYOR

—Boost production efficiency! Pull unit handling costs down! Save plant space and reduce waste! Yes, the new STEEL-PARTS Elevating Conveyor does all this — and pays for itself in a few months' time. Ideal for sending parts or packages from floor to floor in a steady flow — lifts — lowers — loads or unloads at any height. Incorporates the same rugged features that have made all STEEL-PARTS conveyors the standard of the industry. Let STEEL-PARTS engineers make specific recommendations concerning your individual materials handling problem.

MAIL THIS COUPON TODAY

STEEL-PARTS MFG. CO.
4624 W. Harrison St., Chicago, Ill.
☐ Send me information including engineering data and specifications on your Steel-Belt Conveyors.
☐ Have your representative call to discuss our materials handling problems.
Name _____
Firm _____
Address _____
City _____ State _____

STEEL-PARTS
MANUFACTURING COMPANY
DIVISION OF BLACKSTONE MANUFACTURING COMPANY

▲ For more details circle **NED-4375** on enclosed inquiry slip ▲

WIDE SHEETS EASILY SLIT

Throat depths of 18, 24 and 36 inches make it easy to slit wide sheets on Steelweld Pivoted-Blade Shears. 24 inches is standard for all but the smallest machines. 36 inch throats can be provided for many of the larger machines.

This permits the slitting of plates of 36" to 72" wide down the middle for any length.

Steelweld Shears are loaded with exclusive features that speed production and cut costs.

There are no other shears like them.

CUTS METAL 1/8" TO 1 1/2"

Complete line machines available for shearing steel 6'-0" to 18'-0".

STEELWELD Pivoted-Blade SHEARS CATALOG No. 2011

Send for free copy of catalog No. 2011.

THE CLEVELAND CRANE & ENGINEERING CO.
6621 East 282nd St., Wickliffe, O.

STEELWELD SHEARS

For more details circle NED-4377 on enclosed inquiry slip

Write for Catalog OF USES and SPECIFICATIONS

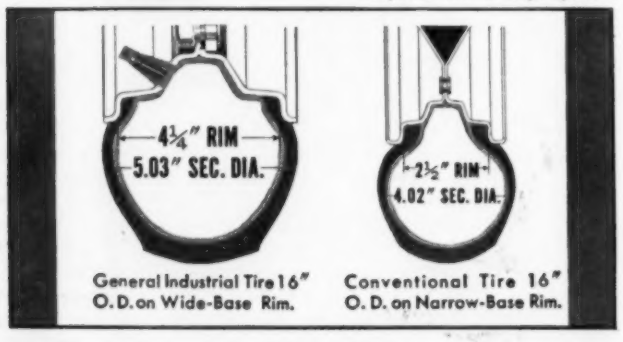
GENERAL Industrial Pneumatics

ADD THESE 6 SELLING POINTS TO YOUR PRODUCT

SAVE
- TIME
- LABOR
- FLOORS

REDUCE
- BREAKAGE
- MAINTENANCE
- COSTS

Available in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 23"—200 to 2000 lbs. cap. for low or high speeds.



General Industrial Tire 16" O.D. on Wide-Base Rim. Conventional Tire 16" O. D. on Narrow-Base Rim.

MORE
- AIR VOLUME
- STABILITY
- LOAD CAPACITY
- MILEAGE

THE GENERAL TIRE

SEND FOR CATALOG... DEPT. 4

THE GENERAL TIRE & RUBBER CO. AKRON, OHIO

For more details circle NED-4378 on enclosed inquiry slip

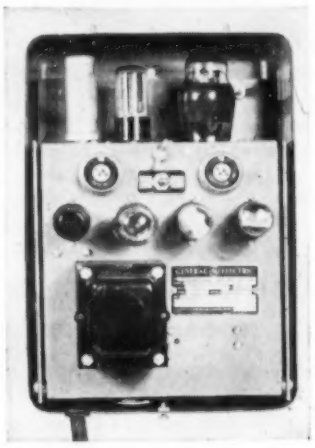
LOW-COST UTILITY BUILDING
one-straight-side type is 24 ft wide

Suitable for many industrial and commercial uses, Quonset 24 Special utility building has length in multiples of 12 ft. Principal support members of building are N-A-X

Hi-Tensile alloy steel that provides ample strength and high resistance to corrosion. Steel members with which building is framed have Stran-Steel nailing groove. Nails driven into this groove are deformed and clinched with high gripping force. This construction facilitates application of common interior lining materials to steel framework. Made by **Great Lakes Steel Corp.**, Stran-Steel Div., 54 Tecumseh Rd., Ecorse 29, Mich.

For more details circle NED-4379 on enclosed inquiry slip

CUT-OFF REGISTER CONTROLS
automatically control register when cutting web of preprinted material

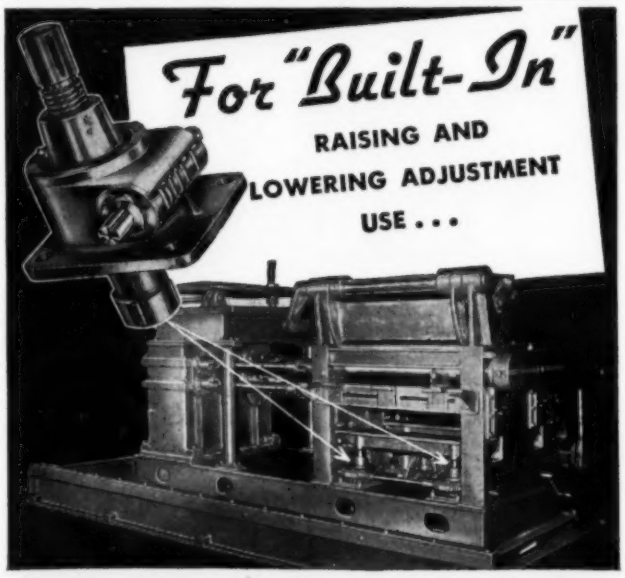


These one-way cut-off register controls are usable on web-fed machines where continuous strip of preprinted material is punched, perforated or cut into predetermined lengths. Controls automatically maintain proper position of cut with respect to designs, trade-marks and other printing. One-way register control is used where low to medium web speeds and medium accuracies are involved. It is applied to wrapping and small bag making machines where web is either underfed or overfed with respect to feed of cutter.

One of two panels in line utilizes thyratron output tube and is applicable on those machines where cam-operated automatic reset switch determines length of time that correction is applied. Where machine timing is not desirable, other panel can be used. This control utilizes vacuum tube output and has electronic timer circuit built into panel. Both controls have relays mounted on panel but can be used to handle external relay or solenoid directly. Panels include voltage regulator tubes to compensate for variations in line voltage and have built-in light source power supplies.

Complementing panels are three web scanners arranged for plug-in connection. One scanner operates on either reflected or transmitted light while another operates on reflected light only. Made by **General Electric Co.**, Control Div., Schenectady 5, N. Y.

For more details circle NED-4380 on enclosed inquiry slip



DUFF-NORTON Worm Gear Jacks

These jacks may be used singly, in tandem or in groups of four, six or eight, connected by means of shafts or mitre gears for raising and lowering mill tables, machine beds, presses, and many other applications. Capacities vary from 5 to 50 tons, with raises from 3" to 25". Jacks are furnished in accordance with load per jack, raise required and application.

For suggested applications write for Bulletin AD-5 H.

THE DUFF-NORTON MANUFACTURING CO.
MAIN PLANT and GENERAL OFFICES, PITTSBURGH 30, PA.
CANADIAN PLANT, TORONTO 6, ONT.
"The House that Jacks Built"

For more details circle NED-4381 on enclosed inquiry slip

PIPE MARKERS anyone can use— everyone can read

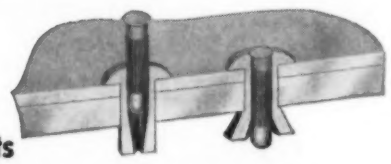
QUIK-LABEL Pipe Markers conform to American Standards Association Pipe Identification System. QUIK-LABELS come on handy cards . . . stick without moistening. Names of materials printed in large black letters on correct ASA background colors. CAN BE READ UP TO 75 FEET. Markers for over 140 materials, ***including all materials listed in ASA Standard A13,*** available on Brady Stock Cards. Specials made to your order. QUIK-LABEL Pipe Markers are Silicone Plastic coated to resist dirt, grease, fumes, moisture . . . indoors or out. Replace slow and costly painting and hand stenciling. Exclusive Starter-Strip automatically releases part of label for fast peeling. QUIK-LABELS mark your pipes so that anyone who can read will know what's in them. ***QUIK-LABELS leave no room for doubt . . . or tragedy.*** Write for useful literature and FREE SAMPLES today.

FREE SAMPLES

W. H. BRADY COMPANY Established 1914
Manufacturers of Self-Sticking Tape Products
Chippewa Falls 5, Wisconsin • Distributors in 125 Cities

For more details circle NED-4382 on enclosed inquiry slip

new DRIVE-PIN RIVET



drive rivets with a hammer and *save time*

As simple as driving nails, the Cherry Rivet Company's series of DRIVE-PIN RIVETS will save you valuable time on sheet metal assembly jobs. No special methods . . . no special tools . . . these rivets are particularly well-suited to fastening light sheet to heavier sheeting or to framework where rigidity is great enough to withstand hammering. For more flexible materials, ask about Cherry Blind Rivets.

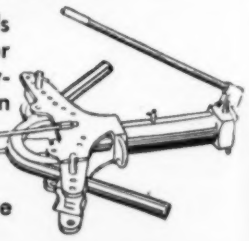
The action of driving the pin into the hollow rivet forces the head of the rivet against the top sheet. In turn, the top sheet is forced tightly against the material beneath. When the driven pin reaches the protruding sections of the rivet, these four sections expand outward and form a tight head on the blind side.

CHERRY RIVET COMPANY
231 Winston Street, Los Angeles 13, Calif.
Address Department F-113

For more details circle NED-4383 on enclosed inquiry slip

For Installation or Repair A Portable

Tal Bender
with new *bend* indicator

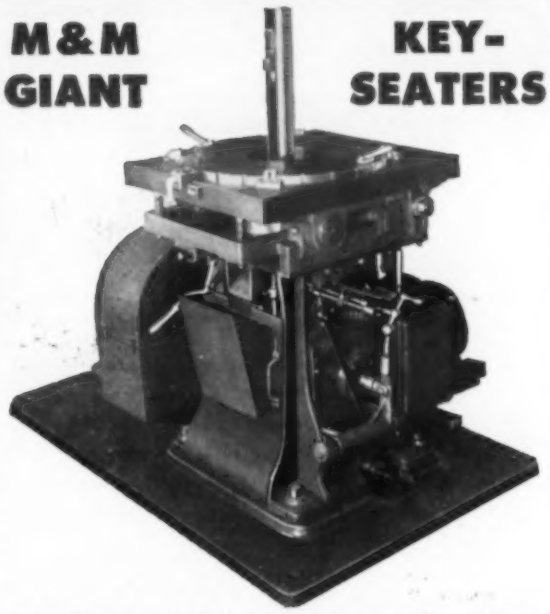


Anyone can make perfect bends with a Tal machine, on-the-job or in-the-shop. This fast working, easy-to-operate bender for wrought iron or steel pipe does in minutes work that otherwise takes many hours. No wonder thousands are in service everywhere. Write today for factual bulletin.

Tal Bender, Inc. Dept. 4 Milwaukee 2, Wis.

For more details circle NED-4384 on enclosed inquiry slip

M&M GIANT KEY-SEATERS

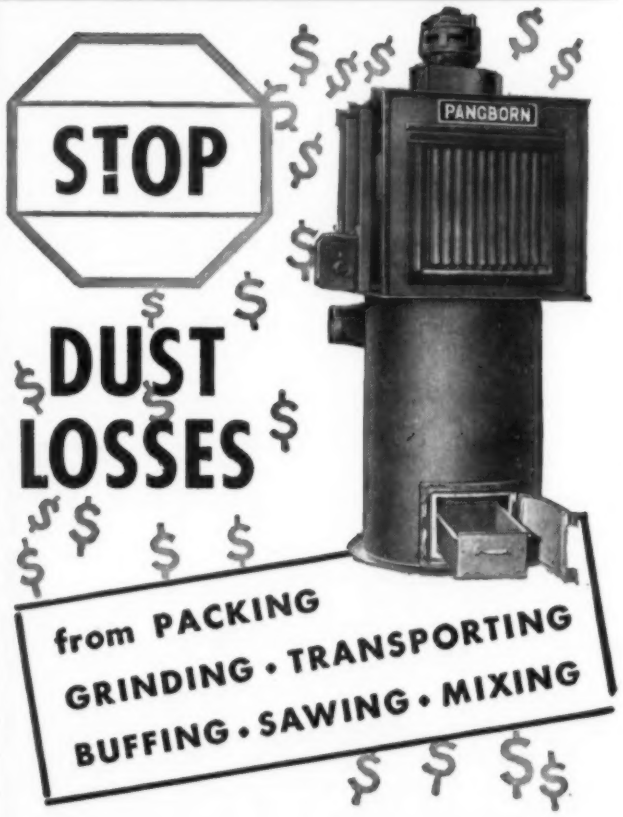


Giant Keyseaters, built in various sizes, speedily and accurately cut keyways or splines in pulleys, gears, and other machine parts. Special fixtures and cutters are available for those "hard-to-do" internal finishing operations which cannot be efficiently accomplished otherwise. Send us your problems.

MITTS & MERRILL

1000 SOUTH WATER STREET • SAGINAW, MICHIGAN

For more details circle NED-4385 on enclosed inquiry slip

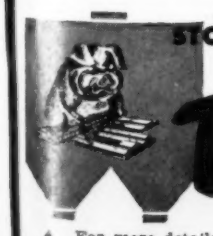


Turn dust losses into *profits* with Pangborn Dust Control! If areas with heavy dust concentrations smother your plant, install Pangborn "CK" Unit Collectors at dust source. "CK" Collectors provide two stage separation, are available in capacities of 1000, 2000 and 3000 cu. ft. per minute. Have famous Pangborn non-sag, cloth-covered screens with motor driven shaker and come factory assembled, ready to operate.

Pangborn Dust Control units stop dust and save money! Reports in Pangborn's files from plants of all types show Pangborn Dust Control cuts maintenance, boosts worker efficiency and recovers valuable materials!

Find out about your plant!

Whether your dust problem is large or small, Pangborn has the *right* Dust Control equipment for you. Bulletin 909A contains full information, shows how to design a system, gives specifications. Write for your free copy today to: PANGBORN CORPORATION, 294 Pangborn Boulevard, Hagerstown, Maryland.



STOP THE DUST HOG from stealing profits with

Pangborn DUST CONTROL

For more details circle NED-4386 on enclosed inquiry slip

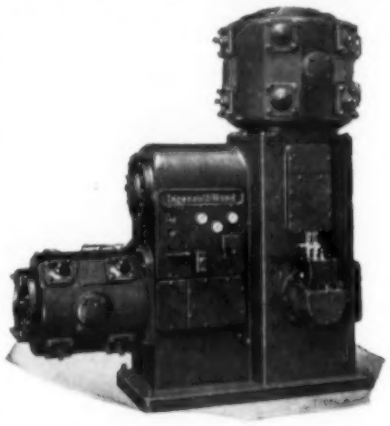
PLASTIC WIRE CONNECTOR usable in fixtures up to 1000 v

Underwriters' Laboratories approved as suitable for use in high voltage lighting fixtures and in industrial applications up to 600 v, this No. 83 Hi-Volt Wire Nut wire connector is recommended for fluorescent fixture, display and lamp manufacturing applications. It consists of plated coil spring imbedded in molded phenolic shell. As Wire-Nut is screwed on, helical cone spring insert automatically compresses wires, twists them together and cross-threads them in one operation. Device will accommodate from two No. 18 up to two No. 14 and one No. 18 wire combinations. Made by **Ideal Industries, Inc.,** 1032 Park Ave., Sycamore, Ill.

For more details circle NED-4387 on enclosed inquiry slip

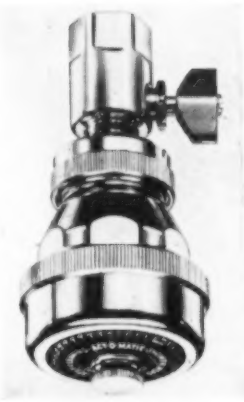
ELECTRIC-DRIVEN COMPRESSOR sizes range from 125 to 350 hp

Of modern packaged heavy-duty type, model XLE electric-driven air compressor is designed for continuous full load service and two-stage compression with from 80 to 125-psi discharge pressures. Unit embodies single vertical low-pressure compressor cylinder, horizontal high-pressure cylinder and synchronous motor mounted directly on crankshaft. Air enters and leaves compressor through main air connections on frame instead of on cylinders and is led to and from both cylinders and intercooler through large passages within frame itself. Counterflow tube-and-finned construction of intercooler gives excellent cooling with small pressure drop. Made by **Ingersoll-Rand Co.,** Dept. A, 11 Broadway, New York 4, N. Y.



For more details circle NED-4388 on enclosed inquiry slip

SHOWER HEAD has automatic self-cleaning action



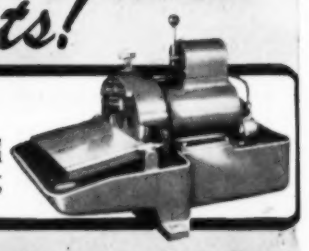
Spray disk incorporated in Act-O-Matic shower head moves upward and downward automatically to effect draining and cleaning. When water is turned on, disk moves downward into shower position so that cone-within-cone spray is delivered. When water is turned off, disk moves upward into drain position. Thus large free waterway is opened through which shower head drains instantly and completely, washing out all dirt particles. Made by **Sloan Valve Co.,** 4300 W. Lake St., Chicago 24, Ill.

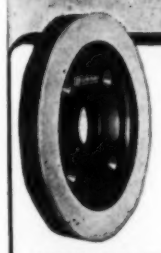
For more details circle NED-4389 on enclosed inquiry slip

THIS CARBIDE GRINDING TEAM *Cuts Costs!*

WICKMAN-NEVEN BENCH GRINDER

—designed especially for grinding or lapping carbide. Has special reversible 1 HP motor, 12 gal./hr. coolant pump, easily adjustable table, swiveling wheel guard.





STEEL-BONDED DIAMOND WHEELS

—practically indestructible with extra long life. Diamond particles stay in place until completely worn. Finish tools better for longer tool life.

RESINOID-BONDED DIAMOND WHEELS

—for faster and freer carbide cutting and less frequent wheel dressing.

STEEL-BONDED CHIP-BREAKER DIAMOND WHEELS

—with many times the service life of other chip-breaker diamond wheels. Reduce wheel and tool costs materially and speed grinding 3-4 times.

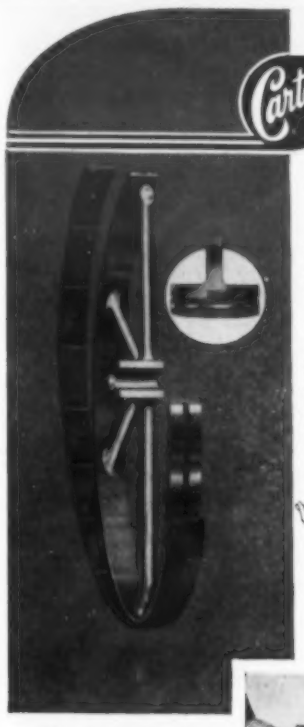
GET THE FACTS *Complete information on these Wickman products is yours for the asking. Write today.*

THE Wickman MANUFACTURING CO. 15533 WOODROW WILSON AVE. DETROIT 3, MICHIGAN

For more details circle NED-4390 on enclosed inquiry slip

New, Revolutionary...

Carter JIFFY-TIRES



Answer ALL Your Bandsaw Tire Problems

That's right! Jiffy Tires are made in sizes to fit any bandsaw wheel. Put on in less than 5 minutes. No cement, glue, rims, bolts or special tools. Already accepted by foremost bandsaw manufacturers as standard equipment. Jiffy Tires are molded from tread-rubber with a steel back-bone.

Write Today!

for your free illustrated folders on Carter's outstanding Jiffy Tires, Micro-Precision Guides, Rigid Wheels & Tires and Guide Line Lights.

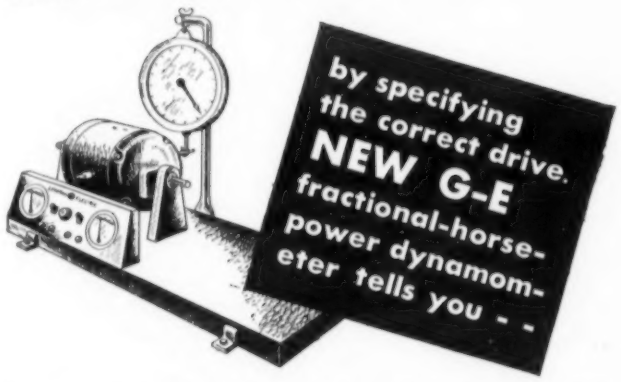
Rub soap suds around inside of tire. Just tap wheel into the tire with soft mallet.

CARTER PRODUCTS COMPANY

969 Michigan Trust Bldg., Grand Rapids, Mich.

For more details circle NED-4391 on enclosed inquiry slip

here's a new way TO SAVE MONEY— IMPROVE YOUR PRODUCT



- Power requirements of appliances, fans, pumps, compressors, and other small machines
- Performance curves on small motors and generators

The price is a new low for dynamometer equipment, only $475.00 list.

Your nearest G-E office can give you complete information or write us for bulletin GEC-635, Apparatus Dept., General Electric Co., Schenectady, New York.

GENERAL ELECTRIC

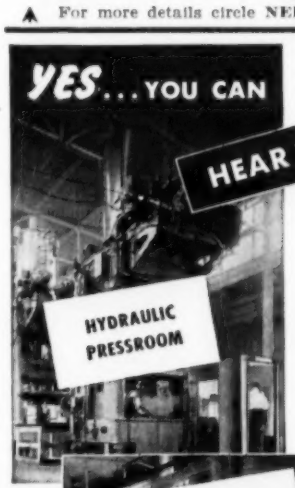
687-41

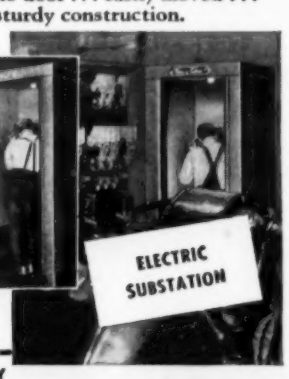
For more details circle NED-4392 on enclosed inquiry slip

YES... YOU CAN HEAR IN NOISY SPOTS

USE Burgess-Manning ACOUSTI-BOOTHS

You can hear easily . . . talk comfortably . . . in a Burgess-Manning Acousti-Booth. Thick walls of sound-absorbent material soak up noise. Conversations are clearer . . . "private." Airy, no door . . . easily moved . . . sturdy construction.





Mail Coupon for FREE BULLETIN

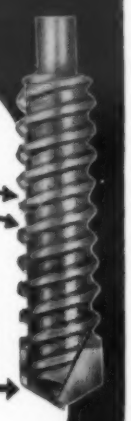
BURGESS-MANNING COMPANY
743-C East Park Avenue, Libertyville, Illinois
Please send booklet describing Burgess-Manning Acousti-Booths.

Name_____
Firm Name_____
Street-City_____

For more details circle NED-4393 on enclosed inquiry slip

FOR FASTER-EASIER DRILLING IN MASONRY

ONLY Cyclo-twist CARBIDE TIPPED DRILL BIT has these 6 advantages



1. DOUBLE "DUST-EXITS"
Each carbide cutting edge forces the dust into its own built-in spiral exit which *Instantly* and *Positively* conveys it out of the hole.

2. NO "CARBIDE-HANGOVER"
The Special Steel Body has the same diameter as the carbide which means sealed-in dust exits plus maximum carbide support and drill strength.

3. No cleaning of holes.
4. Lowest cost per hole.
5. Uniform drilling rate.
6. Accurate holes with less effort.

Used in Rotary Drill Hand Brace Drill Press

Ask your jobber, local Westinghouse Electric Supply Co., or write for illustrated folder.

New England CARBIDE TOOL CO., INC.
Cambridge 39, Mass.

▲ For more details circle NED-4394 on enclosed inquiry slip ▲

SEMI-LIVE SKIDS
Typical Ironbound Money-Savers

★ Short-haul units for carrying loads up to 2,500 lbs. safely and easily. Made of new billet steel and selected hardwood. Bolted construction allows replacement of deck. A short haul system is comparatively inexpensive because a few lift jacks will service many skids.

● This semi-live unit has permanently attached box top. Can also be made with removable top or tiering type top if required.

● Semi-live skid with stake pockets and removable side racks. Available also with end racks, wood or pipe stakes or super structures to meet individual requirements.

Bulletin 7-SL illustrates these units

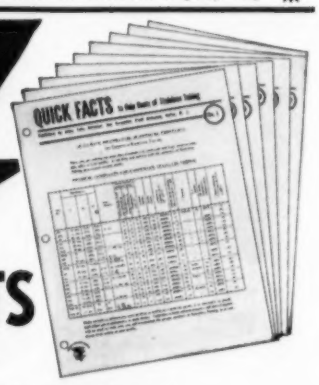
Ironbound

IRONBOUND
BOX & LUMBER COMPANY
Materials Handling Division
55 HOFFMAN PLACE • HILLSIDE, N. J.

SKIDS • SEMI-LIVE SKIDS • DOLLIES • FLOOR TRUCKS

▲ For more details circle NED-4395 on enclosed inquiry slip ▲

NEW For STAINLESS TUBE USERS



QUICK FACTS
Bulletins

giving you information on

- *Corrosion Resistance*
- *Fabrication*
- *Physical Constants*

—and new data to help you get more from every dollar you spend for Stainless Tubing or Pipe.

For your QUICK FACTS about Stainless Tubing, return the coupon today.

THE CARPENTER STEEL COMPANY
Alloy Tube Division • 118 Springfield Road, Union, N. J.

Please send me a set of QUICK FACTS for Users of Stainless Tubing, and put my name on the list to receive future bulletins.

NAME.....TITLE.....
(PLEASE PRINT)
COMPANY.....
(COMPANY AND TITLE MUST BE GIVEN)
ADDRESS.....
CITY.....ZONE.....STATE.....

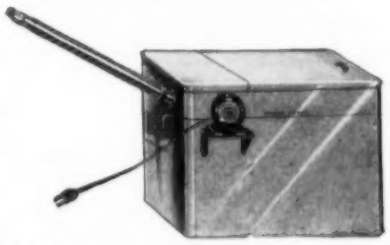
▲ For more details circle NED-4396 on enclosed inquiry slip ▲

PORTABLE MICROSCOPE
range is 20 to 60 power

Laboratory quality for use in field or shop is provided by model No. 233 portable microscope. Entire field is in focus, and instrument is free from prismatic aberrations and has high light efficiency. Magnification range is from 20 to 60 power, and microscope is adjustable for any magnification between these figures. All parts are brass or are steel plated with Dulite finish. Supplied with grained cowhide leather case, instrument can be carried conveniently in pocket. Price is $12.75. Made by **Clarkstan Corp.**, 11927-J W. Pico Blvd., Los Angeles 64, Calif.

▲ For more details circle NED-4397 on enclosed inquiry slip ▲

FLUORESCENT LAMP DISPOSER
destroys 100 lamps in 10 minutes



Fluorescent lamps are ground into tiny pieces safely and quickly under water by means of Flur-O-Lamp disposal unit. Refuse can be carried away in bucket. Requiring less than 2 sq ft of floor space, unit operates on 110-v ac and uses about 12 gal of water. Price is $63.50. Made by **Laduby Co.**, Philips Place, P. O. Box 1123, New Haven 5, Conn.

▲ For more details circle NED-4398 on enclosed inquiry slip ▲

HEADREST GOGGLE
easily adjustable to any head size

Suitable for use by gas welders, cutters, burners, brazers and furnace men, this safety goggle employs free-floating headgear provided with knob to adjust goggle to wearer's head size. Mechanism is enclosed in fiber tube for insulation and to prevent pulling hair. Designed to be worn over eyes or personal glasses, goggle has well ventilated indirect side shields to keep out sparks, metal splashes and stray light rays. It can be obtained with either Noviweld or Noviweld-Didymium lenses in several shades, and replaceable cover lenses are provided to protect filter lenses. Made by **American Optical Co.**, 1492 Mechanic St., Southbridge, Mass.

▲ For more details circle NED-4399 on enclosed inquiry slip ▲

OLSON CONVEYORS

CONTINUOUS MATERIAL FLOW

TO EVERY DEPARTMENT

Here's another example of Olson ingenuity and engineering ability. Combining a revolving table with diverging conveyors, enables one operator to dispatch each incoming package to its proper department rapidly . . . smoothly . . . safely.

If your operation involves the moving of parts, products or raw materials, Olson can provide an efficient system for lifting, lowering or on-the-level handling, tailored to meet your specific requirements.

Get the facts. Write Olson today.

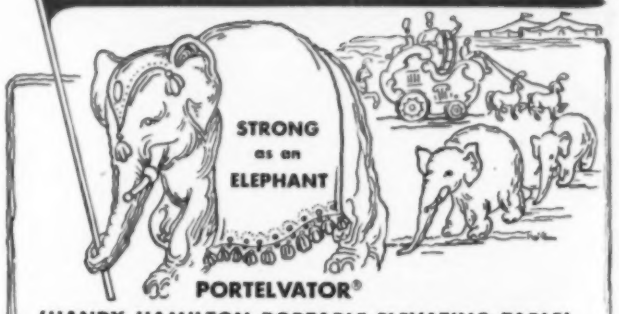
See our catalog in Sweet's File

SAMUEL OLSON MFG. CO., INC.
2423 Bloomingdale Ave. • Chicago 47, Illinois

▲ For more details circle NED-4400 on enclosed inquiry slip ▲

JOIN THE PARADE
OF PROFIT-THROUGH-OPERATING-ECONOMIES

PORTELVATOR® PACES THE PROCESSION



PORTELVATOR®
(HANDY HAMILTON PORTABLE ELEVATING TABLE)

SPECIAL

A Handy Hamilton Elevating Table, especially designed and built for your particular application, will "cost" you nothing, for it will pay for itself in savings. Case histories show, "production increased 45% — overhead reduced 30%"—"$2250.00 table paid for itself in four months"—"paid for itself in 45 days — now have nine, purchased one at a time out of savings effected."

LEARN THE PENNY PINCHING PARTICULARS
WRITE FOR BULLETIN P-50

THE Hamilton TOOL COMPANY
901 HANOVER STREET • HAMILTON • OHIO • U • S • A

▲ For more details circle NED-4401 on enclosed inquiry slip ▲

"Not a Single Solenoid has Burned Out on Our Water Valves Since We Protected them with FUSETRON dual-element FUSES!"

"During the winter of 1948-49 solenoids on five of our water valves burned out due to freezing of the water.

"The replacing coils alone cost us about $50.00 but the labor and operating loss ran much higher.

"To prevent these losses we installed a Fusetron dual-element fuse to protect each coil.

"During the winter of 1949-50 we did not lose one single coil due to burnout — but we did blow quite a few Fusetron fuses.

"The cost of replacing these Fusetron fuses was nothing to the loss we would have had if they hadn't blown."

E. C. Willy, Chief Electrician
H. J. Kaiser Aggregate Plant
Pleasant, California

Fusetron DUAL ELEMENT Fuses
Give All-Purpose 10 Point Protection

1 Protect against short-circuits.
2 Protect against needless blows caused by harmless overloads.
3 Protect against needless blows caused by excessive heating — lesser resistance results in much cooler operation.
4 Provide thermal protection — for panels and switches against damage from heating due to poor contact.
5 Protect motors against burnout from overloading.
6 Protect motors against burnout due to single phasing.
7 Give DOUBLE burnout protection to large motors — without extra cost.
8 Make protection of small motors simple and inexpensive.
9 Protect against waste of space and money — permit use of proper size switches and panels.
10 Protect coils, transformers and solenoids against burnout.

DON'T RISK LOSSES

One burned-out solenoid . .
One needless shutdown . . .
One lost motor . . .
One destroyed switch or panel . . .

May cost you far more than replacing every ordinary fuse with a FUSETRON dual-element fuse.

Protect yourself by installing them in every set of fuse clips throughout the entire electrical system.

FUSETRON
TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION
BUSS

FUSETRON is a trade mark of
BUSSMANN MFG. CO.,
Division of McGraw Electric Co.,
University at Jefferson St. Louis 7, Mo.

▲ For more details circle NED-4402 on enclosed inquiry slip ▲

YOU GET UNIFORMITY

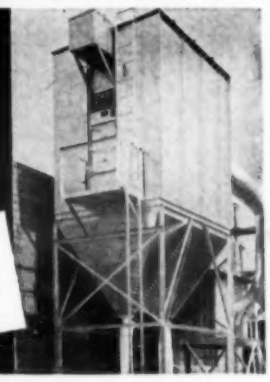
When You Specify

For years Ex-Cell-O has been known by American industry as headquarters for precision-made bushings . . . Ex-Cell-O carries one of the largest and most varied stock of drill jig bushings available in the world.

EX-CELL-O CORPORATION • DETROIT 32, MICHIGAN

For more details circle **NED-4403** on enclosed inquiry slip

8 *Ways to increase production with* **DRACCO DUST CONTROL**



HOW MANY WILL BENEFIT YOUR PLANT?

Dust in small or large amounts slows up production. DRACCO Dust Control ALWAYS increases efficiency. How many of the 8 factors will benefit YOUR plant? 1—Recovery of valuable materials, 2—Healthier and happier workers, 3—Increased efficiency of plant, 4—Reduced cost of equipment repair, 5—Eliminates occupational diseases caused by dust, 6—Stops complaints by neighbors, 7—Eliminates expensive law suits, 8—Complies with State laws and City ordinances. Every installation is benefited by several. Have DRACCO Engineers analyze your dust problem. They have over 35 years' experience in dust and fume control. Why not consult them now?

For Further Information Write

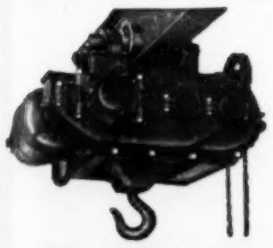
DRACCO CORPORATION

4053 E. 116th Street, Cleveland 5, Ohio — New York Office: 130 West 42nd St.

PNEUMATIC CONVEYORS • DUST COLLECTORS

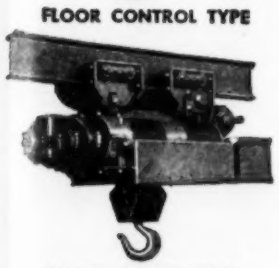
For more details circle **NED-4404** on enclosed inquiry slip

NORTHERN HI-LIFT
HEAVY DUTY HOISTS



FLOOR CONTROL TYPE

CAB CONTROL TYPE



SWIVEL TRUCK TYPE

ALSO STANDARD AND TRAMRAIL TWO-TRUCK TYPES

For safe, dependable handling of heavy loads in heavy-duty service, NORTHERN HI-LIFT HOISTS permit more diversified, general purpose use—wider adaptability to changing service demands.

ASK FOR BULLETIN H-110

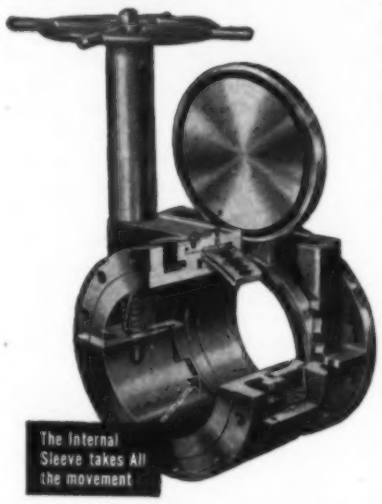
NORTHERN ENGINEERING WORKS, 2615 Atwater St., Detroit 7, Mich.

NORTHERN CRANES AND HOISTS

For more details circle **NED-4405** on enclosed inquiry slip

BLIND VALVE
is available in 6 to 12-in. sizes for inflexible piping installations

Internal sliding sleeve utilized in Rigid Line blind valve seals against and releases spectacle plate without movement or expansion of pipe line. Sleeve is moved against or away from plate by means of ball-bearing mounted ring gear actuated by turning handwheel. Freedom of operation is not affected by misalignment or expansion and contraction of pipe line.



Face-to-face dimensions are same as those of standard gate valves. Working parts are enclosed, packed in lubricant and sealed to prevent contamination of line fluid or its entering mechanism. Spectacle plate slot is open at top only to prevent loss of product and guard against fire hazard while plate is being reversed. Made of steel, valve is available in ASA 150 and 300-psi classes in sizes from 6 to 12 in. Spectacle plate packing rings can be supplied in variety of materials to meet service requirements. Made by **Hamer Oil Tool Co.**, 2920 Gardenia Ave., Long Beach 6, Calif.

For more details circle **NED-4406** on enclosed inquiry slip

DOUBLE-POLE SWITCH TIMER
four timing ranges offered

Operated by spring powered clock movement, No. 86 double pole timer is supplied in timing ranges of 30 minutes and 1, 2 and 12 hours. Contacts are rated 15 amp at 125 v. In illustrated model, timer movement and switch are contained in cast aluminum wrinkle finished, surface mounting case equipped with ⅜-in. nipple. Flush panel mount model is provided with three holes in dial plate ring.

In operation, pointer is set for required interval to close switch circuit and start timing mechanism. When pointer reaches zero at expiration of interval, switch circuit is opened automatically. Whenever required, pointer can be returned manually to zero to open circuit and turned to change time setting without injuring mechanism. Made by **Walser Automatic Timer Corp.**, 617 Graybar Bldg., New York 17, N. Y.

For more details circle **NED-4407** on enclosed inquiry slip

For Quick, Tight Connections on Field or Factory Air Hose

"AIR KING"
Quick-Acting, Universal Type
HOSE COUPLING

A strong, durable coupling especially useful where quick, convenient change-overs are required. Plain design—no parts to get out of order or clogged with dirt. Made in hose ends and male and female threaded pipe ends. Completely interchangeable. Patented safety locking device is proof against vibration and rough handling. Malleable iron (cadmium plated) or bronze.

Sold by Manufacturers & Jobbers of Mechanical Rubber Goods

DIXON VALVE & COUPLING CO.

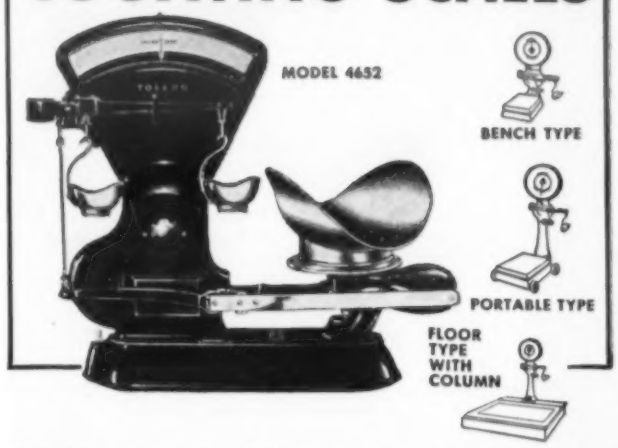
HANCOCK ST. and COLUMBIA AVE., PHILADELPHIA 22, PA., U.S.A.

BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON • TORONTO

For more details circle **NED-4408** on enclosed inquiry slip

Control Costs with

COUNTING SCALES



Toledo's *complete line* of Counting Scales gives you the right model for *accurate cost control* in a wide range of jobs! For issuing pre-determined quantities of uniform parts . . . counting unknown quantities . . . for *faster inventory counts* . . . or to get accurate receiving, shipping, production, cost and piece-work counts. Complete selection of models . . . for parts weighing only a few grains . . . up to total counting capacities of several tons. Also choice of double and triple ratio combinations. Send for booklet 2204. Toledo Scale Company, Toledo 12, Ohio.

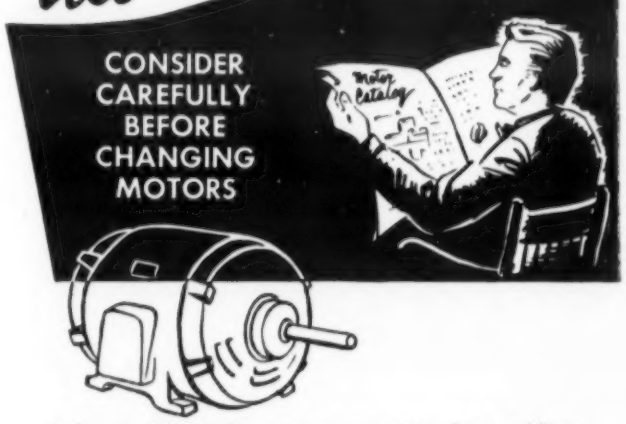
TOLEDO

HEADQUARTERS FOR SCALES

For more details circle **NED-4409** on enclosed inquiry slip

Use What You Have!

CONSIDER CAREFULLY BEFORE CHANGING MOTORS



It is possible to improve any motor drive with a simple addition, a—

Rawson Centrifugal Clutch or Coupling

The Rawson is not new. It has been widely used by industry for more than 15 years because—

1. Motors can be selected for RUNNING instead of STARTING
2. Motors come up to speed unloaded
3. Across-the-line starting is practical
4. Starting current is reduced
5. Starts are cushioned—always without shock
6. The acceleration period can be regulated and controlled

USE THE MOTOR YOU HAVE
— with a Rawson!

AVAILABLE FROM A FRACTION TO 1200 HORSEPOWER

CONSULTATION INVITED

Consultation is invited on any starting or drive problem no matter how severe. The Rawson can, in nearly every case, be accommodated to the need, at considerable saving in first cost and improved electrical efficiency.

Send For Bulletin

CENTRIC CLUTCH COMPANY

26 SOUTH AVENUE, WEST
CRANFORD, NEW JERSEY

For more details circle **NED-4410** on enclosed inquiry slip

ELIMINATE . . .

1. Screw Thread Troubles
2. Solid Bushings

Stripping, abrasion, wear, corrosion, galling, and seizing are eliminated when Heli-Coil® Screw Thread Inserts are used as a permanent tough lining between thread and mating member. These stronger, more durable precision-formed wire inserts of stainless steel or phosphor bronze are designed for use in iron and steel, aluminum, magnesium and other non-ferrous metals, and in wood, plastics, and ceramics.

Heli-Coil Inserts are original equipment components in such industries as aviation, automotive, railroad, electronics, machinery, appliances and small tools. They assure production economies, improve products . . . save weight and space, make assembly and disassembly easier . . . simple. Heli-Coil Inserts are the low-cost answer to all screw thread troubles.

Write for the complete Heli-Coil design data folder and prices.

HELI-COIL CORPORATION
47-59 35th STREET • LONG ISLAND CITY 1, N. Y.

For more details circle **NED-4413** on enclosed inquiry slip

• Unretouched photo of ½" x ¼" finished bar (actual size) showing how brushing eliminates rolled-in scale.

Red-hot tip on nipping steel blemishes in the bud

SECONDARY SCALE . . . the hard material that gouges its way into steel bars during rolling . . . has been eliminated by Osborn Brushing.

Progressive steel mills, intent on improving the finish of bar stock, are removing this hard scale by brushing the bars during rolling . . . at speeds up to 1,000 feet per minute . . . with Osborn Power Driven Disc-Center* Wire Wheel Brushes.

Red hot steel coming through the mill shoots through a twin set of counter-rotating Osborn brushes.

This is another example where an **O**sborn **B**rushing **A**nalyst has worked with a progressive manufacturer on problems of cleaning, finishing or polishing to improve products and cut costs. His services, backed by Osborn's extensive technical facilities, are yours for the asking. He will gladly show you how *you*, too, can benefit from new Osborn brushing techniques. Ask today for an **OBA!** *The Osborn Manufacturing Company, Dept. 299, 5401 Hamilton Avenue, Cleveland 14, Ohio.*

* Trademark

YOU CAN IMPROVE FINISH AND CUT COSTS BY BRUSHING

LOOK FOR THE NAME OSBORN ®

RECOGNIZED EVERYWHERE FOR THOROUGH APPLICATION ENGINEERING

For more details circle **NED-4414** on enclosed inquiry slip

PORTABLE HAND TORCH
uses canned self-pressurizing fuel and has two interchangeable tips

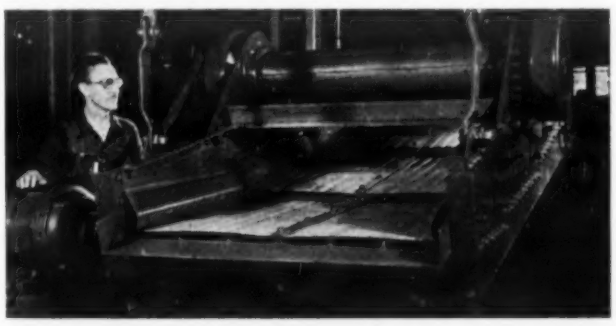
Lighting instantly with a match, Prepo maintenance workers' torch burns with clean blue 2200° flame. Nontoxic and nonpoisonous fuel is compound of petroleum hydrocarbons and is self-pressurizing and self-vaporizing. Rubber valve mounted on top of container permits attachment to mating fixture on torch. Seamless steel container supplies fuel until empty, when it is removed quickly and replaced by new one. Pressure in can is 12 psi, and liquid weighs 13 oz.

Device is equipped with two interchangeable burning tips. Larger tip throws long broad flame where much heat is required quickly, while smaller type has long pin-point flame for work where heat must be concentrated in small area. Weighing 1½ lb, unit fits easily into tool box. Industrial uses include heating metal for bending and reshaping, soldering, loosening of 'frozen' bolts and nuts, paint removing and sweating lugs on heavy cable. Made by **Pressure Products Corp.**, Dept. NED, 140 N. Dearborn St., Chicago 2, Ill.

For more details circle **NED-4415** on enclosed inquiry slip

SINGLE DECK SCREEN
constructed for fine screening

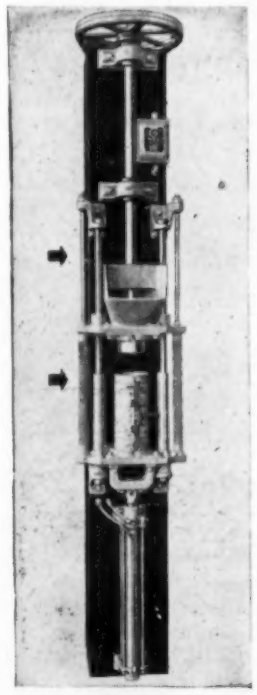
Added to line of Ripl-Flo screens, Tri-Slope single deck unit is particularly adapted for handling coal or limestone. Deck is divided into three sections, each with



slope five degrees less than preceding one. This permits high rate of material travel at feed end and reduced rate as material moves toward discharge end in order to maintain proper bed depth at each point.

Screen is equipped with Sta-Kleen device for handling moist material. This consists of rubber balls which bounce between screen surface and ball-retaining deck located several inches below screen cloth. They jar loose small damp particles clinging to screen surface. Two-bearing vibrating mechanism is mounted above screen body. Made by **Allis-Chalmers Mfg. Co.**, Dept. 1240, 6900 Norman St., Milwaukee 1, Wis.

For more details circle **NED-4416** on enclosed inquiry slip



Arrows indicate location of NOPAK FLO-TROL VALVES

ACE Drain-Tile Machine employs NOPAK Cylinder, Valves!

Precision molding of concrete drain tile on an Ace Machine is a simple, efficient, low-cost operation. The Model "A" NOPAK Air Cylinder raises the casing to charging position . . . then retracts it at a *slow, controlled speed* while rotary polishing trowel puts a smooth, even finish on interior of the tile. Two NOPAK Flo-Trol Valves control cylinder speed . . . in both directions, to insure uniformity of repetitive work-cycles.

This is typical of many work-feed applications in which NOPAK Valves and Cylinders are used.

GALLAND-HENNING MFG. CO.
2755 S. 31st Street, Milwaukee 46, Wis.

Write for Bulletin 100

Representatives in Principal Cities

NOPAK
VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

A 5786-1/9

For more details circle **NED-4417** on enclosed inquiry slip

MORE WELDS -LESS TIME

with Worthington-Ransome Positioners

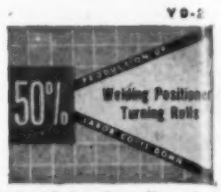
Your welder gets more arc time out of each working hour when the work is positioned for economical "downhand" welding. He can use heavier electrodes, too, for better welds.

Capacities from 100 lb to 20 tons. Also: Turning Rolls from 3 to 75 tons, stationary and self-propelled.

Write for Bulletin 210C Worthington Pump and Machinery Corporation, Welding and Assembly Positioning Equipment Division, Dunellen, N. J.

WORTHINGTON

WORTHINGTON-RANSOME WELDING POSITIONER



For more details circle **NED-4418** on enclosed inquiry slip

for low cost, dependable, time proven performance

STURDY PORTABLE EASY-TO-MOUNT

You can make big savings in time and labor in your mixing and blending operations with an Alsop Portable Mixer. Other concerns are doing it now on thousands of different liquid products.

You can count on years of trouble-free, low-cost service.

Equipped with our universally adjustable clamp, you can mount it to any container. Alsop Portable Mixers are available in a wide range of horse-powers, propeller combinations and speeds.

Send for this free catalogue.

Alsop Engineering Corporation
506 East Road, Milldale, Conn.

ALSOP ENGINEERING CORP.
Filters, Filter Discs, Mixers, Agitators, Pumps and Tanks

For more details circle **NED-4419** on enclosed inquiry slip

Topflight Tape TOPFLEX

NEW RUGGED PRESSURE—SENSITIVE TAPE CONSTRUCTION

EXCLUSIVE WITH TOPFLIGHT

Rugged printed tape for marking, coding, labeling. Resists extremes of temperature and humidity. Printed surface protected from abrasive action. Available in choice of colors.

MADE TO ENGINEERS SPECIFICATIONS

TOPFLIGHT TAPE COMPANY
YORK, PENNSYLVANIA, U. S. A.

For more details circle **NED-4420** on enclosed inquiry slip

READINGS AT A GLANCE

for BOTH AC and DC

Instant Current Measurements Without Breaking Circuit or Insulation . . .

You can read 'em fast and accurately with the Columbia Tong Test Ammeter by merely clamping the tongs around the electrical conductor. Tong Test is the only instrument of its type that can measure both AC and DC. Cannot burn out for it has no windings. Safe, convenient and light in weight. Interchangeable scale ranges up to 1000 amperes. Five types to accommodate cables up to 3⅞", bus bars up to 4½" x ½". Voltage readings, too, with the Voltor Attachment.

Write for Tong Test Bulletin ND-400

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave., Cleveland 14, Ohio

For more details circle **NED-4421** on enclosed inquiry slip

VEMCO DRAFTING MACHINES

Designed by Engineers for Engineers

1. *Convenient thumb-action indexing for every 15°.*
2. *Simple and positive band tightening device.*
3. *Flexibly articulated arms for easy head movement and flat-lying scales.*

THE engineers responsible for the design of VEMCO Drafting Machines are thoroughly familiar with drafting problems. VEMCO Machines incorporate ALL the facilities desired by the engineer to fill his exacting needs. ★ The VEMCO offers smooth, effortless movement . . . positive setting and control for speed and accuracy. . flexibility for convenient operation . . . elimination of an awkward assortment of drafting tools . . . sturdy construction for durability. ★ VEMCO Drafting Machines are finished in blue-green metallic color for eye comfort. ★ Ask your VEMCO dealer for a demonstration or write today for illustrated catalog covering drafting machines and drawing instruments.

V&E MANUFACTURING CO.
PASADENA 2, CALIFORNIA

For more details circle **NED-4422** on enclosed inquiry slip

OVER 50 TYPES TO FIT YOUR NEEDS

YOU CAN GET an Allis-Chalmers current or potential transformer, or metering outfit, for almost *every* power need! Also special designs for unusual requirements. Popular types and sizes available for immediate shipment.

Balanced distribution of materials gives uniformly high accuracy and liberal thermal capacity. And you get fast service, easy ordering; Sales Offices, Dealers, warehouses and Certified Service Shops located throughout the nation. Get NEW 32 page bulletin CB7168.

A-3045

ALLIS-CHALMERS, 918A SO. 70 ST.
MILWAUKEE, WIS.

ALLIS-CHALMERS

For more details circle **NED-4423** on enclosed inquiry slip

FILE HANDLE
cuts its own thread on file

Usable with any tool having tang, No. 3 file handle cuts its own thread for secure locking. Die-cast metal alloy ferrule covers entire end of hardwood handle for protection against splintering. Screw-on type handle is shown at left of illustration, along with standard file handle in center and soldering iron handle at right. Made by **Lauber Handle Mfg. Co.,** Dept. NED, 3240-42 W. National Ave., Milwaukee 4, Wis.

For more details circle **NED-4424** on enclosed inquiry slip

FLOOR MOP
yarn used is highly absorbent

Spun cellulose yarn employed in Dura-Sorb mop absorbs water and dirt emulsions quickly and is also extremely durable. Dirt and grime are removed easily by wringing or rinsing mop under running water. It dries fast to soft sanitary condition. Variety of sizes is available to fit any standard mop holder. Sample strands of yarn can be obtained from manufacturer. Made by **American Standard Mfg. Co.,** 2516 S. Green St., Chicago 8, Ill.

For more details circle **NED-4425** on enclosed inquiry slip

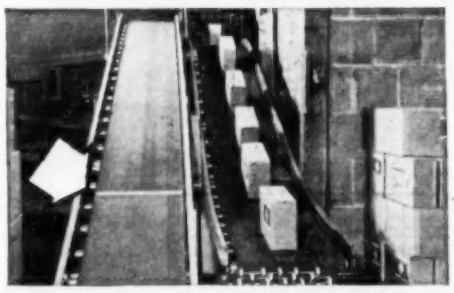
FLEXIBLE SHAFT MACHINE
can be moved easily throughout shop

Placement of motor on low tripod base of Wyco Lo-Gravity flexible shaft machine assures stability so that it will not tip over when moved over uneven floors or when it is pulled about by flexible shaft. Locking clamp on top of machine holds handpiece securely so that stationary grinding operations can be performed also. (*Editor's Note: A full description of this machine appeared in Apr. '50 NED, but the illustration used was of another machine.*) Made by **Wyzenbeek & Staff, Inc.,** 849 W. Hubbard St., Chicago 22, Ill.

For more details circle **NED-4426** on enclosed inquiry slip

ALLIGATOR®

CONVEYOR BELT LACING



*Every Tooth A Vise**

in Long Continuous Lengths for Conveyor Belts . . . . .

- ★ Excellent for Package Conveyors, Portable Loaders, Trenching and Ditching Machines, etc.
- ★ In canneries where corrosion or rust is a problem specify Alligator made of Monel.
- ★ For magnetic separators or anti-sparking specify Alligator made of Everdur.
- ★ Separable and smooth on both sides.
- ★ 12 sizes. For belts from 1/16" to 5/8" thick—and *any width.*

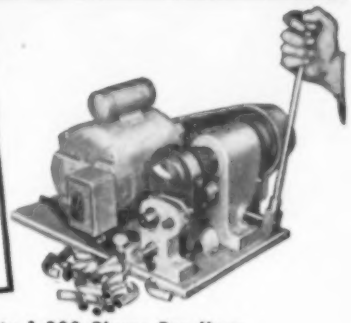
Order from Your Supply House. Ask for Bulletin A-60.

FLEXIBLE STEEL LACING CO. 4664 Lexington St., Chicago 44, Ill.

JUST A HAMMER TO APPLY IT

For more details circle **NED-4427** on enclosed inquiry slip

New PINES Tube & Rod END-FINISHING MACHINE SPEEDS WORK OUTPUT



Completes 500 to 1,000 Pieces Per Hour

A broad range of end-finishing operations can now be handled with speed and precision on this new Pines bench-type end-finishing machine. It embodies a new type mechanical chuck and chuck closing mechanism that cuts production time. Jaws are arranged for interchangeable split-type inserts to accommodate any length tube, pipe or rod.

Profitable Uses

- *Deburring*
- *Inside and Outside Chamfering*
- *Facing*
- *Center Drilling*
- *Drilling*
- *Reaming*
- *Single Point Boring*
- *Light Forming*
- *Turning*

Brief Specifications

Capacity: Up to 2" diameter—any length.
Cutters: 3 adjustable—4 to cover range.
Motor: ½ h.p. with step sheave.
Weight: 170 lbs.

3 Operations in 1 Motion of Handle

One movement of the operating handle quickly clamps the workpiece, removes the stock stop, and feeds the cutter to the work. Release of the handle returns the chuck to its original position and simultaneously unclamps the piece. Thus, with *one hand free for loading* the machine, an operator can speed work output.

For long-run work, there's a fully automatic Pines Model with foot-control to help you save additional time. Models up to 5" capacity are also available.

Write for free bulletin

Get more facts today on this new, time-saving production tool. Find out how it will help you save time on your work.

PINES ENGINEERING CO., Inc.
Specialists in Tube Fabricating Equipment
640 Walnut Aurora, Illinois

For more details circle **NED-4428** on enclosed inquiry slip

HANSEN COUPLINGS

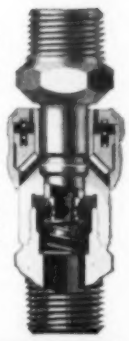
GIVE YOU 2 Big Advantages

● With Hansen couplings you save precious minutes every time you change air tools—every time you connect or disconnect a fluid line carrying gas, liquid or grease.

To connect, you merely push plug into socket—flow starts instantly. To disconnect, pull back sleeve on socket—coupling disconnects. Flow is shut off instantly and automatically.

Available in a wide range of sizes and types, each type engineered to meet the specific requirements of your particular application.

One-way shut-off, two-way shut-off, and straight-through types.
Write for Catalog



THE HANSEN MANUFACTURING COMPANY
4031 WEST 150th STREET • CLEVELAND 11, OHIO

For more details circle **NED-4429** on enclosed inquiry slip

More Cuts Less Cost

Stanley-Carter R5A Router

This full horsepower, 18,000 r.p.m. Router has a spot in every shop . . . for pattern work, production and construction. Used with Stanley-Carter high speed bits, it saves time . . . cuts costs. For special applications, tungsten carbide tipped bits can be furnished. Router is equipped with oversize oil sealed bearings. Endshield design keeps out dust. More useful for more years. See your dealer, or write for folder. Stanley Electric Tools, 563 Myrtle St., New Britain, Conn.

STANLEY
Reg. U.S. Pat. Off.

HARDWARE • TOOLS • ELECTRIC TOOLS • STEEL STRAPPING • STEEL

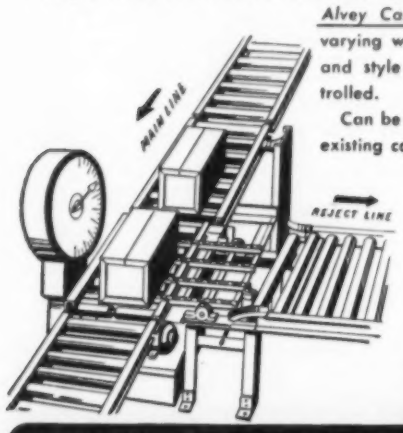
For more details circle **NED-4430** on enclosed inquiry slip

ALVEY a new case rejector

Packages must be accurate to a prescribed weight, or they are removed for correction. Underweight packages are automatically detected and removed from a main production line, by an Alvey Case Rejector. Built in varying widths to suit the size and style of case to be controlled.

Can be easily installed in an existing conveyor line.

Upon request we will mail questionnaire for engineering data. Ask for bulletin CR-A1.



ALVEY Engineered... PACKAGE CONVEYING

ALVEY CONVEYOR MANUFACTURING COMPANY
St. Louis 24, Missouri • Sales Offices in Principal Cities

For more details circle NED-4432 on enclosed inquiry slip

Two types, 7 basic sizes. Capacities from 400 CFM to 23,500 CFM.

nyb COMET EXHAUSTAIR

Propeller type ventilating fans deliver large volumes of air at low resistance and low current consumption. All wheels are machine balanced for smooth, vibrationless operation. They are laboratory tested, accurately rated and fully guaranteed in strict accordance with Standard Codes.

CERTIFIED RATINGS — AUTHORIZED BY NAFM

Write for Bulletin 494

nyb THE NEW YORK BLOWER COMPANY
GENERAL OFFICES • 32nd STREET & SHIELDS AVENUE • CHICAGO-16
FACTORIES AT LAPORTE, INDIANA AND CHICAGO, ILLINOIS

For more details circle NED-4433 on enclosed inquiry slip

Engineered HOLTITE Fastenings

HOLTITE - Phillips Recessed Head Screws, Bolts and allied fastenings can be safely driven with spiral and power drivers even on finished parts. These modern fastenings cut driving time in half, and make stronger, neater, vibration - resisting assemblies. Tapered bit will not slip from matched recess to mar work or injure workman. No burrs, broken heads or crooked driving. Improves appearance.

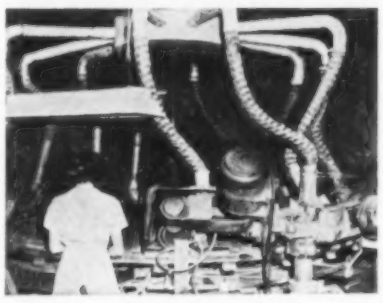
HOLTITE Slotted Head fastenings are furnished in any type, head style and finish. Produced to exacting precision standards these trouble - free fastenings are made from the finest selected materials laboratory tested and rigidly inspected throughout production. Our Engineering Staff will gladly study your fastening problems and recommend economical solutions. Send complete information.

CONTINENTAL SCREW CO.
New Bedford, Mass., U.S.A.
CALL YOUR DISTRIBUTOR

For more details circle NED-4434 on enclosed inquiry slip

New Processes and Materials

REINFORCED FLEXIBLE TUBING supplied in 3 to 30-in. ID sizes



Usable for conveying air and gases as well as powdered, granular or other light solids, Spiratube flexible tubing is resistant to rupture or collapse under high pressure or vacuum. Standard construction consists of rustproof spring-steel helical core covered inside and out by double-seam stitched cotton duck and coated with Neoprene. Variations of this basic design employ multiple-ply walls and other coatings for different services. Tubing is wear and heat resistant, retractable and easily assembled without couplings. Made by **Flexible Tubing Co.**, Dept. 734, Branford, Conn.

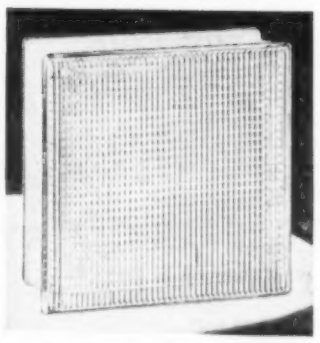
For more details circle NED-4435 on enclosed inquiry slip

CONCRETE TREATING SOLUTION permits oil painting on concrete

Containing General Electric silicones, Stopall type C and CP solutions for treating concrete and cement block buildings will also keep water out of cinder blocks, porous stucco and sandlime brick. Tests indicate resistance to normal weathering conditions in excess of 12 to 15 years. Made by **Stopall Waterproofing Mfrs, Inc.**, Commerce Bldg., Kalamazoo, Mich.

For more details circle NED-4436 on enclosed inquiry slip

LIGHT-DIRECTING GLASS BLOCK affords good light transmission



Designed to transmit more daylight under adverse conditions than previous types, Insulux No. 363 light-directing azimuth-correcting glass block is suitable for all industrial and commercial locations where ample natural light is essential. Major portion of daylight is directed toward ceiling from where it is reflected downward onto work surfaces. While ribs on outside face of block spread daylight sidewise to deliver light on walls at front and rear of rooms, block offers little surface glare when viewed from below normal eye level. Shades or blinds are not required. Made by Insulux Div., **American Structural Products Co.**, Dept. E, Ninth Floor, Ohio Bldg., Toledo 1, O.

For more details circle NED-4437 on enclosed inquiry slip

Heavy-Duty ELECTRIC HAMMER with NO KICK!

New "Cushion Snap" Action Gives Light Weight, Easy-to-Use, Low-Cost Hammer with TERRIFIC WALLOP!

The Noble & Stanton "Super Slugger" hits as hard and fast as heavy electric hammers — yet weighs only 7½ pounds — has *no kick* — and costs *much less!* It's entirely new, thoroughly tested "Cushion Snap" principle eliminates kick, direct vibration and operator fatigue. Plug in this heavy-duty hammer anywhere — use it on concrete or sheet metal, for stripping flooring — on ladders or scaffolds — with one hand — and all you feel is the motor running! The simplicity of the low-cost "Super Slugger" makes it easy and economical to maintain. Try it today — or write for full information.

DISTRIBUTORS: A few territories are still available.

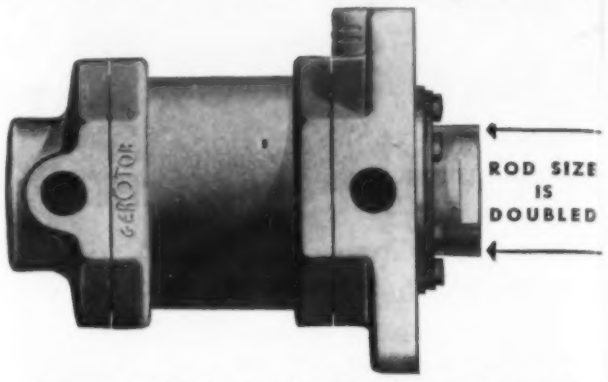
Our Distributor Will Demonstrate or Write for Bulletins and Prices

NOBLE & STANTON, INC.
1010 BROADWAY • BEDFORD, OHIO

For more details circle NED-4438 on enclosed inquiry slip

GEROTOR 2:1 CYLINDERS

Increase Output!



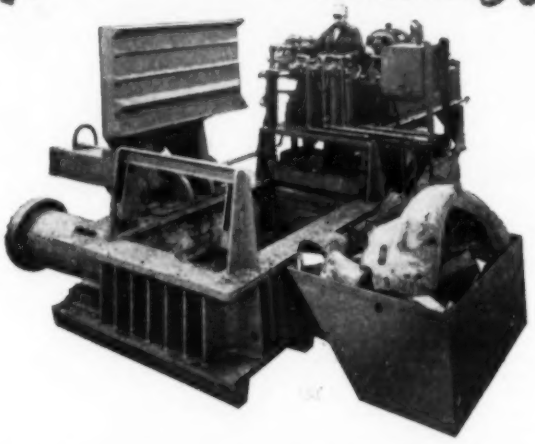
Gerotor 2:1 Hydraulic Cylinders have a piston rod about twice the diameter of a standard rod. This reduces displacement, allowing faster retraction. With cycle time shortened, the cylinder accomplishes more work. Saving is made in motor and pump size. Available in 6 mountings, in 10 bore diameters, in strokes up to 96" and with cushioning.

Write for Catalog Section 104
RIVETT LATHE & GRINDER Inc., Dept. NED-6
Brighton 35, Boston, Mass.

WHEN YOU APPLY HYDRAULIC OR AIR POWER, PLAN WITH GEROTOR

For more details circle NED-4439 on enclosed inquiry slip

here's the nearest thing to Automatic Baling!



It's the Dempster-Balester, equipped with Auxiliary Compression Door. Every phase in the baling cycle is operated hydraulically. The Model "275" above turns out 4½ to 5 tons of baled scrap per hour with Auxiliary Compression Door. This door completely eliminates in some operations, and reduces in others, the costly process of tying up two or three extra men as arrangers. There are four Dempster-Balester models, one of which is sure to fit your needs. Write today for complete information! A product of Dempster Brothers, Inc.

DEMPSTER BALESTER — DEMPSTER BROTHERS
460 N. Knox • Knoxville 17, Tenn.

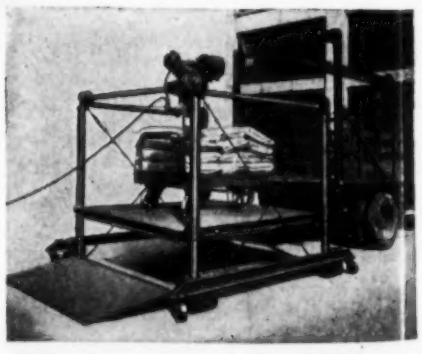
For more details circle NED-4440 on enclosed inquiry slip

man-saver

Handles your heavy loads from level to level *Safely • Easily*

NEW SERVICE LEVELER

Portable model at additional cost—can be moved to facilitate loading and unloading of trucks in factory yard, etc.



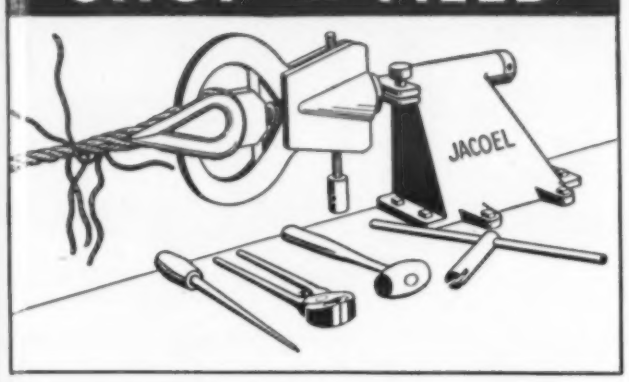
IMMEDIATE SHIPMENT

Save your workers a lot of backaches—save time, trouble and money, by handling heavy loads from level to level with the new Service LEVELER. Dependably powered by a rugged, fully-enclosed, 1 H.P. motor, it lifts as much as 6,000 pounds as high as 5 feet...in less than a minute. Loads, machine and operator are fully protected under all operating conditions. Outstanding safety features include: easy manual control of starting and stopping at any height; automatic top and bottom limit stops; positive motor cut-off stops; centrifugal safety governor; slack cable shut-off; post guard rings. Here's a unit that can be installed anywhere in just a few hours at amazing low cost...requires no sub-surface installation...obsoletes slow, dangerous manual handling...pays for itself in a very short time. *Write for detailed specifications today.*

SERVICE CASTER & TRUCK CORP.
INDOOR MILES Made EASIER and SAFER
Executive Offices: Albion, Michigan
Plants at Albion, Michigan and Somerville 43, Mass.
See Your Classified Telephone Directory for Nearest Distributor

For more details circle NED-4441 on enclosed inquiry slip

SHOP OR FIELD



"One-Man" Wire Rope Splicer

TIME TESTED IN AIRCRAFT AND NAVAL USE

RESISTANCE REGULATOR OVERCOMES CABLE TORQUE. This Patented Feature is One Reason for Savings in Splicing Man-Hours of up to FIFTY PERCENT.

Special Tools

Wire tighteners — Splicing Needles

20 lb. Effort = 500 lb. Pull

100 BARR WASHINGTON 6, D. C. — QUAY Industries — EXCLUSIVE MFRS. JACOEL TOOLS

DISTRIBUTOR INQUIRIES INVITED

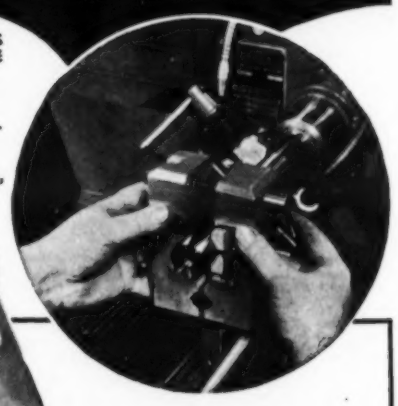
For more details circle NED-4442 on enclosed inquiry slip

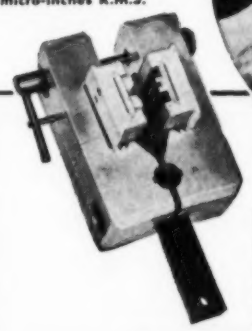
HERE'S AN ALL NEW LOW COST METHOD of Finishing External Diameters:

SUNNEN EXTERNAL HONING

FOUR EXTERNAL HONE SETS HANDLE COMPLETE RANGE FROM .120" TO 2.750"

- Removes "cloverleaf" grind pattern
- Corrects "rainbow" warpage, taper, barrel and out-of-round
- No "washout" at shoulders, vents or ports
- Base metal finish to 2 micro-inches R.M.S.





FOR SHAFTS, SPINDLES, PLUNGERS, PINS, PISTONS, ARBORS, AND NUMEROUS OTHER PARTS FROM .120" TO 2.750" IN DIAMETER

SUNNEN EXTERNAL HONING is an entirely new method for accurately sizing and finishing external diameters. It gives you precise geometric accuracy; holds dimensional tolerances to .0001" and better. Produces a surface finish as fine as 2 micro-inches R.M.S. — is used on practically all metals.

COMBINES THE PRECISION OF LAPPING WITH THE SPEED OF HONING

Production rates are usually more than 5 times as fast as lapping. Operation is clean, convenient and fast. There are no laps to make, no loose abrasives or compound to handle, no recharging. Rigid bonded abrasive stones have a predictable cutting rate. Automatic sizing control assures exact duplication of sizes. Hone disengages instantly for gauging and unloading work. For a single part or long runs you save set-up time, production time, and gauging time.

Has Many Uses — for production jobs, tool room, salvage and maintenance. You have positive, controlled stock removal; guaranteed accuracy; any surface finish you need; high speed. Sunnen External Honing adds up to faster, better work at LOWER COST.

SEND FOR FREE BULLETIN describing the operation and advantages of Sunnen External Hones.

SUNNEN PRODUCTS COMPANY

7961 Manchester Ave. • St. Louis 17, Missouri

For more details circle NED-4443 on enclosed inquiry slip

New Processes & Materials

PRESSURE-SENSITIVE TAPE is smudgeproof labeling type

Water and oilproof, acid resistant and capable of withstanding temperatures up to 150° F, Labelon pressure-sensitive labeling tape consists of two sheets of acetate tape with special carbon material sealed between. Identification cannot be erased, smudged or rubbed off; and tape is designed for use where constant handling would ordinarily obliterate markings on conventional tapes. Packaged in its own container, this tape is available in ⅝ or ¾-in. widths with either blue or black edging and sells in 500-in. rolls at $1.49. Made by **Labelon Tape Co.**, Delaware at Anderson, Rochester, N. Y.

For more details circle NED-4444 on enclosed inquiry slip

CLEAR GLOSS LACQUER is exceptionally easy-rubbing

High quality finish on various types of wood is provided by New Period No. 819 clear gloss rubbing lacquer. It has excellent build, flexibility and durability and is easily rubbed on surface. Made by **New York Woodfinishers Supply Co.**, 108 Imlay St., Brooklyn, N. Y.

For more details circle NED-4445 on enclosed inquiry slip

NONJACKETED PLASTIC PACKING dense material has good resiliency

Having wide variety of applications, Versipak nonjacketed plastic packing is available in two formulas: black graphited type for general use and white nongraphited type for food handling and other special services. Dense resilient material conforms readily to shape of stuffing box; and as it wears, gland can be drawn up, condensing material and keeping it in service longer. Packing is usable at temperatures to 350° F and at pressures up to 600 psi where bull rings or close tolerance glands are provided. It can be used at higher temperatures when provision is made for cooling stuffing box, rod and gland. Spirals and butt-cut rings are available in from ⅛ to 1-in. sizes in increments of 1/16-in. Made by **Raybestos Manhattan, Inc.**, Packing Div., 121 E. Steigle St., Manheim, Pa.

For more details circle NED-4446 on enclosed inquiry slip

Looking for ways to cut costs?

use a WELLS METAL CUTTING BAND SAW

In thousands of plants all over the world, Wells Saws are proving that it is possible to cut metal faster and more accurately at lower cost. This is accomplished through machine design and the principle of *continuous cutting*. As each tooth does its share of the work, the blade is cutting all the time—there is no lost motion. This means more cuts per day and lower unit cost to you. Three standard models of Wells Metal Cutting Saws are available to meet virtually every need. Use the handy chart below to find the saw you need to meet your requirements and ask your Wells dealer for complete information or write direct.

Wells SAWS — Wells

Products by Wells are Practical

METAL CUTTING BAND SAWS

WELLS MANUFACTURING CORPORATION 1313 HARDING ST., THREE RIVERS, MICHIGAN

For more details circle NED-4447 on enclosed inquiry slip

the new ANGLE Gear

STANDARDIZED RIGHT ANGLE GEAR UNIT with UNIVERSAL MOUNTING

AIRBORNE ACCESSORIES CORPORATION

25 MONTGOMERY ST. • HILLSIDE 5, NEW JERSEY

HOLLYWOOD, CAL., DALLAS, TEX., OTTAWA, CAN.

For more details circle NED-4448 on enclosed inquiry slip

FOR POLISHING

FOR BUFFING

FOR TUMBLING

FOR BLASTING

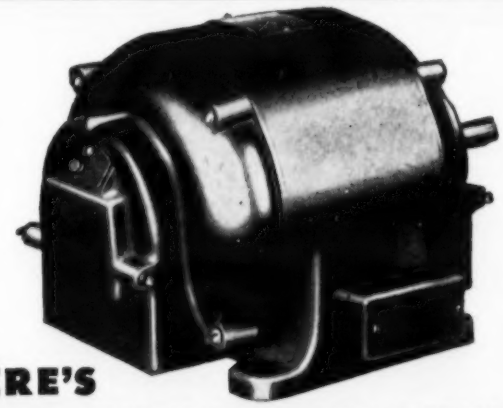
SIMONDS ABRASIVE CO.

ABRASIVE GRAINS Fused crystalline aluminum oxide abrasive. In all standard grain sizes or run-of-the-mill sizes. Hard, sharp, tough. Uniformly sized. Specially treated to remove impurities. Produced under complete Simonds control and trademarked Borolon, Boroblast, Borogrit and SANS-SLIP. Write for inspection samples and prices. Give grain size and intended use.

SIMONDS ABRASIVE CO., 5514 TACONY ST., PHILA. 37, PA.

DISTRIBUTORS IN ALL PRINCIPAL CITIES

For more details circle NED-4449 on enclosed inquiry slip



HERE'S MOTOR EXPERIENCE THAT CAN BE *yours*

• A high percentage of all Peerless Motors are manufactured to meet the specific operating requirements of the equipment with which they are to be used. Answering these motor problems has given Peerless engineers an experience that can be yours when you call Peerless for advice on motor applications.

You will save time, energy and money by turning your motor problems over to Peerless. Call on us by telegram or telephone. Increased engineering and production facilities can be put to work for you promptly.

THE PEERLESS ELECTRIC COMPANY • WARREN, OHIO

Manufacturers of Quality Motors for more than 55 years

Single Phase • Polyphase • Direct Current Motors

Peerless Electric MOTORS · FANS · BLOWERS

For more details circle NED-4450 on enclosed inquiry slip

NEW KENNAMETAL DISC FILE

- CUTS... Doesn't Grind
- SPEEDS UP JOBS
- SLASHES COSTS

For Use on Non-ferrous Metals and Plastics . . . to Snag Castings, Cut Off Flashing, Face and Square Surfaces, etc.

The free and uniform cutting action of this new Disc File is the result of unique design. Triangular prisms of strong, hard Kennametal (90.0 Rockwell A) are copper-brazed to a steel plate, in several courses. They are shaped, grouped, and positioned to provide 30° negative axial rake, 30° clearance angle, and 10° negative radial rake. The resultant multiplicity of sharp, sturdy cutting edges removes material in sizable chips—no abrasive dust—produces smooth, true surface. Workpiece remains cooler than with abrasive wheels, when file is run at proper speed, because chips dissipate heat of cutting. Recommended speeds: 5000-7000 SFM for harder materials; 8000-9000 SFM for soft or gummy materials.

Kennametal Disc Files can be mounted on grinder, abrasive disc machine, motor end, or disc file machine, by means of a suitable adapter.

Four sizes are available: 6", 8", 10", 12" diameters, priced at $107.00, $185.00, $255.00, and $325.00 respectively. They soon pay for themselves in savings effected. Catalog DF49 gives full particulars. Write for a copy.

KENNAMETAL Inc., LATROBE, PA.
MANUFACTURERS OF SUPERIOR CEMENTED CARBIDES AND CUTTING TOOLS THAT INCREASE PRODUCTIVITY

For more details circle NED-4452 on enclosed inquiry slip

ARCCO-MACNICK NOW

OFFERS 8 DAY CLOCKS and CHARTS

NEW EIGHT DAY ROTATION

With this NEW clock 11 rotation speeds are possible. Converter gear units available for 2, 3, 4, 6, 8, 12 or 24 hours and 2, 3, 7 and 8 day rotation.

ARCCO-MACNICK CHART CLOCKS are ruggedly built and hermetically sealed for years of trouble-free service. Adaptable to practically every make of instrument. Price $10.50. Converter gear units $3.50 each F.O.B. Los Angeles or Tulsa.

ARCCO CHARTS—Eight day Arcco Charts are now available for use on practically all Emco, Foxboro and Wescott orifice meters. Charts for other instruments soon available.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

Send for Chart and Clock Bulletins

For more details circle NED-4453 on enclosed inquiry slip

RIG IT IN

5 seconds!

Here's a snatch block any man can rig in 5 seconds . . . *without a wrench!* No loose parts; nothing to drop or lose. Available in 6", 8" and 10" sheave diameters. Sold by distributors everywhere. For catalog showing all wire rope blocks—1½ to 250 tons . . . write

American Hoist & Derrick Company
St. Paul 1, Minnesota

Plant No. 2: South Kearny, N. J.
Sales Offices: New York, Pittsburgh, Chicago

22 5301

AMERICAN HEAVY DUTY UTILITY SNATCH BLOCK

For more details circle NED-4454 on enclosed inquiry slip

New Processes & Materials

ENGRAVING MARKING STICK eliminates use of liquid paint

By utilizing semisolidified paint in handy stick form, Lacquer-Stik marking device can be used for wiping on or filling in stamped, engraved or etched markings and

designs on plastics, metals, glass and ceramics. Supplied in eight different colors, paint hardens quickly and becomes permanent. Filled-in engraved parts can be subjected to temperatures as high as 500° F without change in composition or holding properties. Made by **Lake Chemical Co.**, 3052 W. Carroll Ave., Chicago 12, Ill.

For more details circle NED-4455 on enclosed inquiry slip

LIQUID HAND SOAP can be diluted with tap water

Quick removal of dirt is effected with Sof-Tutch liquid hand soap without causing skin irritation. It foams quickly and completely. Consisting of mild vegetable and cocoanut oils and hand softening additives, it is saponified in such a manner that it will never become rancid. Standard colors are light gold and opal green, but others can be supplied on special order. Made by **Essential Chemicals Co.**, Dept. N, 744 N. Fourth St., Milwaukee 3, Wis.

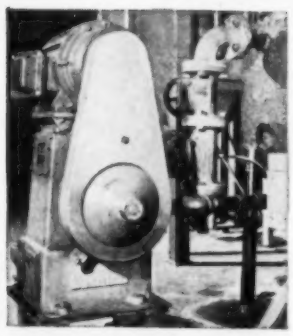
For more details circle NED-4456 on enclosed inquiry slip

WATERPROOF ENAMEL protects concrete and masonry

Made with plastic rubber base, Stone-Dri enamel flows on rough surfaces with ease of liquid rubber and retains rubber's elasticity and toughness. It withstands destructive chemical action of lime and alkali found in cement, concrete, stucco and other masonry and resists heavy traffic, frequent scrubbing, strong soaps and moisture. Flowing on evenly, it levels itself and dries overnight without any disagreeable odor. It is available in silver and lead gray, red and green in 1-qt and 1-gal containers. Made by **Sapolin Paints Inc.**, Dept. N, 229 E. 42nd St., New York City, N. Y.

For more details circle NED-4457 on enclosed inquiry slip

HIGH VACUUM PUMPS for PROFITABLE OPERATION



HIGH vacuum processing necessitates vacuum pumping equipment to provide the low pressures required for efficient and profitable operation.

Stokes high vacuum "MICROVAC" Pumps provide the necessary low pressures . . . they combine simplicity of design, high volumetric efficiency, low power consumption, and lowest operating costs. Easily installed with low upkeep and maintenance.

This catalog should be in your files . . . it has a wealth of valuable high vacuum data. Sent on request.

F. J. STOKES MACHINE CO.
5964 TABOR ROAD
PHILADELPHIA 20, PA.

FJS

F. J. STOKES MACHINE COMPANY

For more details circle NED-4458 on enclosed inquiry slip

PROTO* Power Sockorse ...for Speed and Force!

BIG NEWS!!

PROTO* Power Sockets Tripled

Fast as a Derby winner and strong as a plow horse, PROTO* power socket wrenches are equally useful with power nut runners and manual attachments. The greatly expanded PROTO* line has many types and designs—to provide the right power horse for your work. Race to your PROTO* dealer and buy the ones you need. Write for catalog to

PLOMB TOOL COMPANY
2275X Santa Fe Ave., Los Angeles 54, Calif.

*PROTO means PROfessional TOols. It's the new name for the tools that have been preferred for 43 years.

5086

PROTO TOOLS LOS ANGELES

For more details circle NED-4459 on enclosed inquiry slip

Announcing the NEW improved Royal stools with Foam Rubber seats

No. 668 STOOL

- ★ New 2" thick FOAM RUBBER seat provides the ultimate in comfort and efficiency.
- ★ New longer screw stem affords positive swivel action.
- ★ Equipped with rubber-cushion steel floor guides.

60 DAY Free TRIAL
examine it... test it... use it without obligation

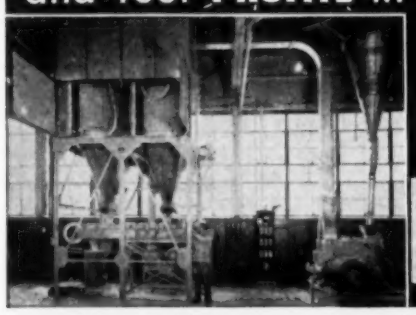
10 YEAR Free MAINTENANCE POLICY

WRITE TODAY FOR DETAILS!

ROYAL METAL MFG. CO.
175 N. MICHIGAN AVENUE
CHICAGO 1, ILLINOIS

For more details circle NED-4460 on enclosed inquiry slip

Keep Your DUST Out of the Air and Your PROFITS in the Bag—with a MIKRO-COLLECTOR



4-Bag MIKRO-COLLECTOR (left) as auxiliary to No. 8 MIKRO-ATOMIZER (right)

Revolutionary principles employed in design of new MIKRO-COLLECTOR* insure optimum dust recovery and sensational filter rates.

Installation performance records have proved its efficiency in recovery of valuable dusts and handling highly concentrated dust loads, as well as poisonous, noxious and radio-active dusts.

Our research laboratory and test facilities are available for your dust collection problems without charge or obligation.

SEND FOR—new bulletin "Dependable DUST Retention"

*Patents applied for by H. J. Hersey, Jr. and Pulverizing Machinery Company

PULVERIZING MACHINERY COMPANY
28 Chatham Road Summit, New Jersey

MIKRO-COLLECTOR
Reg. U.S. Pat. Off.
By the makers of
MIKRO-PULVERIZERS and MIKRO-ATOMIZERS

For more details circle NED-4461 on enclosed inquiry slip

SCHRAMM Pneumatractor

ANNOUNCING . . . the SCHRAMM Model 60 and 105 *Pneumatractors* the latest and most modern self-propelled compressors built. A tractor-compressor combination powered with the standard Model 60 *Unistage* or the 105 *Pneumapower* Compressor. These units are also designed with a completely engineered and approved set of accessories such as front-end loaders, snow plows, backfill blades, front and rear winches, mowers, posthole diggers, rotary brushes, PNEUMAJACK, etc.

SCHRAMM INC. THE COMPRESSOR PEOPLE WEST CHESTER PENNSYLVANIA

For more details circle NED-4462 on enclosed inquiry slip

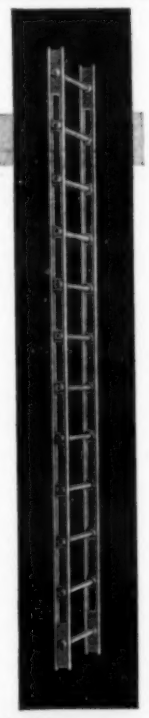
DARTS
COST LESS IN THE LONG RUN

Why? Because Darts are designed to be used over and over again. First of all, they have two bronze seats spherically ground to form a true ball joint. Thus, they tighten easily — form a drop-tight connection without excessive wrenching. No need to stretch or jam the seats. And once in place, the practically indestructible, air-refined, malleable iron of body and nut shrugs off tough abuse. Uncouple them whenever you want — use them over and over again.

E. M. DART MFG. CO., Providence 5, R.I.

For more details circle NED-4463 on enclosed inquiry slip

Specify
ALCO-LITE
Aluminum Ladders



Fire fighters need a ladder that is light (for quick maneuvering), strong (for safety under heavy loads), and durable (for low maintenance and replacement costs). That is why ALCO-LITE Aluminum Ladders are favorites in fire departments throughout the country . . . and that is why you can use them profitably *in your plant.* ALCO-LITE Industrial Ladders are made from the same high-strength aluminum alloy as ALCO-LITE Fire Ladders . . . in fact, the Type SL Single Wall Ladder illustrated is the identical ladder sold to fire departments. Write for Industrial Catalog describing the Type SL and eight other ALCO-LITE Aluminum Ladders.

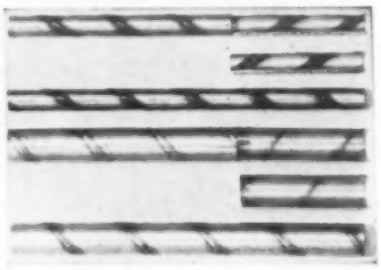
Pioneer Builders of Aluminum Industrial Ladders

ALCO-LITE ALUMINUM LADDERS
ALUMINUM LADDER COMPANY
346 CARBIS STREET • WORTHINGTON, PENNA.

For more details circle NED-4464 on enclosed inquiry slip

New Processes & Materials

SPIRAL WELDED TUBING made with inert gas-shielded arc



Spiral welded tubing of almost any diameter and thickness can be produced easily by forming stainless steel, Inconel or plain carbon steel into closed spiral and welding joint with Heliarc torch. Same process and equipment can be used to make tubing of brass, aluminum or magnesium. Diameters of tubing range from ¼ to 3 in. and walls from 0.015 to 0.0625-in. Advantages of process are speed and adjustable feature that permits tubing of different size and thickness to be welded with only few adjustments of forming head and welding machine. Following welding, tube can be given cold draw to produce smooth surface. Tubing made by **B & M Mfg. Co.,** 1825 Monroe N. W., Grand Rapids Mich.

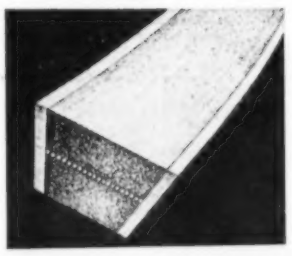
For more details circle NED-4465 on enclosed inquiry slip

LOW MELTING ALLOY begins to bond at 354° F

Available in ⅛, 3/16 and ¼-in. sizes, EutecRod 15 white metal alloy is useful for sealing cracks and building up defects on cast iron and other metals. It is particularly suitable for use where high temperatures may cause distortion or cracking such as on very thin sections, delicate castings, machine tool ways, etc. Welds made with this rod are watertight up to pressure of 1140 psi and can be easily ground, machined, polished or hand-scraped. In addition to having affinity for cast iron, rod forms excellent base for babbitt metal on iron and bronze bearings. Made by **Eutectic Welding Alloys Corp.,** Dept. A-2, 40 Worth St., New York 13, N. Y.

For more details circle NED-4466 on enclosed inquiry slip

RAYON-CORE V-BELT can be spliced endless on sheaves



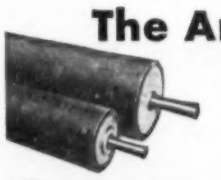
Containing built-in row of rayon cords bonded between leather plies, Tension-Guard V-belt minimizes stretch in service. Material is supplied in rolls or in endless belts and can be spliced endless on sheaves. Scarfed joint is used, and ends are joined with Duxbak waterproof cement. Mechanical fasteners can also be employed.

Also available are E-Z lap cutter and lap press. First tool cuts belt on bias, making long tapering cut and producing feather edge on ends. Lap press grips belt during drying process. When belt is installed directly in grooves, tension rod and clamp are added to each end of press clamp to allow installation under any desired tension without dismantling drive. Made by **Chas. A. Schieren Co.,** 35 Ferry St., New York 7, N. Y.

For more details circle NED-4467 on enclosed inquiry slip

What's YOUR Roll Problem?

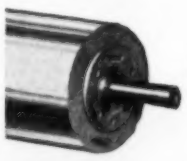
The Answer is often:



USE

SHAF-TITE* ROLLS

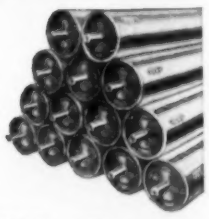
Many Patented Constructions



Choice of

METAL, RUBBER, or WOOD ROLLS

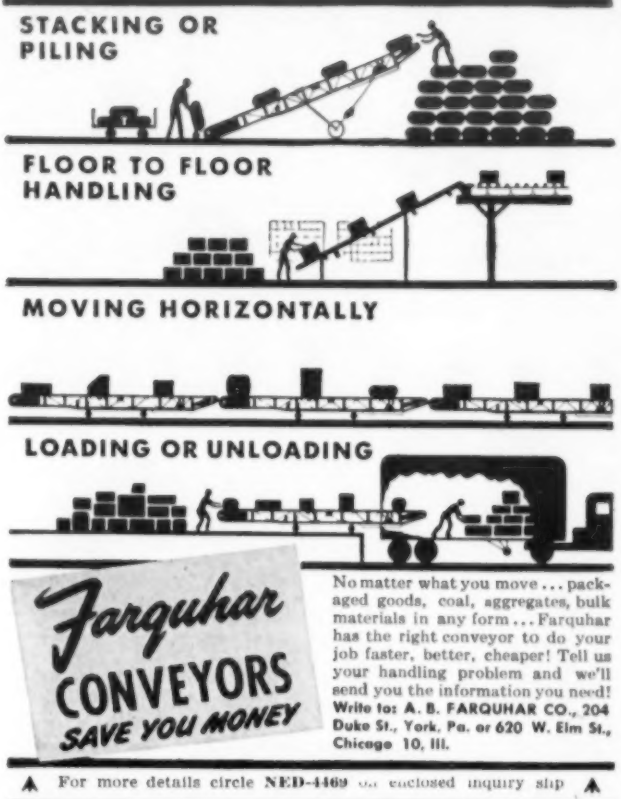
Send For NEW ROLL CATALOG No. 48
Industrial Roll Division



RODNEY HUNT MACHINE CO.
973 Main Street Orange, Mass., U. S. A.
*Reg. U.S. Pat. Off.

For more details circle NED-4468 on enclosed inquiry slip

Handle Packages?



Farquhar CONVEYORS SAVE YOU MONEY

No matter what you move . . . packaged goods, coal, aggregates, bulk materials in any form . . . Farquhar has the right conveyor to do your job faster, better, cheaper! Tell us your handling problem and we'll send you the information you need! Write to: A. B. FARQUHAR CO., 204 Duke St., York, Pa. or 620 W. Elm St., Chicago 10, Ill.

For more details circle NED-4469 on enclosed inquiry slip

Here's the saw you'll see cutting costs!

New WALKER-TURNER 12" Tilting Arbor Saw

Every feature of this new heavy duty Tilting Arbor Saw is designed to help you reduce construction costs.

Table is a convenient 48" wide by 38¾" deep, for ease in handling work. Motor and tilting unit are securely attached to underside of table, assuring maximum rigidity and stability for accurate cutting. New cast aluminum rip fence locks both front and rear to keep it parallel to saw blade at all times. It's easy to adjust, assures accurate work without requiring a test cut.

But Walker-Turner designs with ALL your needs in mind, and in woodworking plants that means *safety* as well as fast, accurate cutting. Important safety features on the 12" Tilting Arbor Saw include "T" slots for miter gauge . . . a two-piece blade guard (with pawls to prevent kickback)—gives complete protection even when saw blade is tilted.

Put this machine to work in your plant and watch how quickly it cuts operating costs. Send for name of your nearest Walker-Turner dealer and copy of catalog. Address Department N6.

SOLD ONLY THROUGH AUTHORIZED DEALERS

KEARNEY & TRECKER MILWAUKEE
WALKER-TURNER DIVISION
PLAINFIELD, NEW JERSEY

For more details circle NED-4470 on enclosed inquiry slip

NEW

There's always something new in RAPISTAN

ALUMINUM POWER BELT CONVEYOR

Light weight, reversible power belt conveyor, for loading, unloading or stacking all types of packaged or bagged materials! It's the new, aluminum Stevedore, Jr.: roll it from job to job, place it easily in position! Capacity to 750 lbs. Non-corrosive. Lengths from 11' to 21'. Belt widths, 10" and 16". ⅓ or ¾ HP motor.

Write for prices and descriptive literature!

The RAPIDS-STANDARD COMPANY, Inc.
201 Rapistan Building
Grand Rapids, Michigan

Representatives in Principal Cities

Rapistan® MATERIAL flow EQUIPMENT

CONVEYORS: Power or Gravity, Portable and Stationary
Also CASTERS • HAND & PLATFORM TRUCKS.

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Made for YOUR temperature and pressure control design problems

★

BRIDGEPORT

Bellows Assemblies

● These mechanical marvels are used in hundreds of ways in practically all industries. What's more, they're designed and built to meet *your* requirements—to help your products perform better. Wide range of metals and sizes. Write today for Catalog LZ-100; it's brimful of ideas!

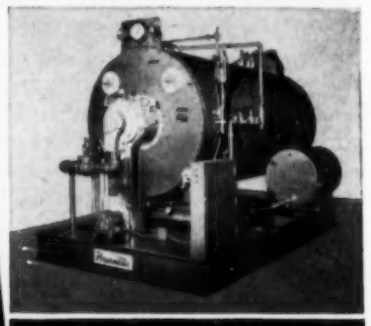
Bellows Assemblies . . . Bellows . . . Bellows Devices

BRIDGEPORT THERMOSTAT
Division
ROBERTSHAW-FULTON CONTROLS CO., BRIDGEPORT 1, CONN.

▲ For more details circle NED-4472 on enclosed inquiry slip ▲

LOW-COST POWER & HEAT

FOR:
Bottling Works
Chemical Plants
Dairies
Food Processors
Hosiery Mills
Institutions
Meat Packers
Metalworking Plants
Plastic Mfrs.
Public Buildings
Textile Mills
Etc.



ORR & SEMBOWER
Powermaster®
STEAM GENERATORS

- High efficiency cuts fuel costs as much as 40%
- Packaged design saves excessive installation costs
- Automatic operation frees engineer for other duties
- Mounted on steel base—no bricking required
- Delivered fully wired and factory-tested
- Widespread service by factory-trained men

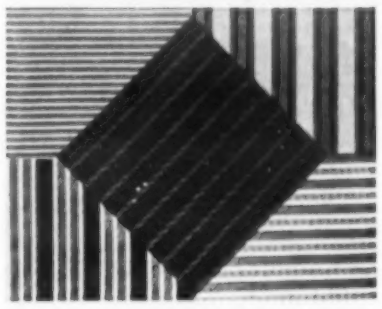
High and low-pressure units—15 to 300 HP.—for light oil, heavy oil, gas or combination gas-oil firing. Free catalog mailed promptly—address:

ORR & SEMBOWER, INC.
930 Morgantown Road, Reading, Pa.

▲ For more details circle NED-4473 on enclosed inquiry slip ▲

New Processes & Materials

PLASTIC UPHOLSTERY FABRIC
scuffproof material fits snugly



Five striped patterns added to line of Lumite fabrics woven of Saran plastics include fancy and warp-faced twill weaves. Liberty red, Elm green and ivory and Carol green, ivory black combinations are available in fancy twill weaves. Warp-faced twill weaves include Liberty red, Clipper gray and pearl gray; Elm green, Piper green and ivory; and Liberty red-Clipper gray designs. Fabric is not harmed by food, grease, dirt or gum and can be cleaned easily by soap and water or cleaning fluid. Made by **Chicopee Mfg. Corp.**, Lumite Div., 40 Worth St., New York 13, N. Y.

▲ For more details circle NED-4474 on enclosed inquiry slip ▲

INSULATING VARNISH
remains flexible after baking

Since leads can be bent and twisted after No. 123 insulating varnish is cured without danger of conductor breaking or varnish cracking, it is particularly suitable for impregnating transformer and other similar coils. It is clear material with excellent bonding characteristics; high dielectric strength; and exceptional resistance to moisture, transformer oils, mineral oils and solvents. It penetrates deep into coil windings and bakes throughout to form unified solidly bonded mass. Made by **Irvington Varnish & Insulator Co.**, Dept. NED, 6 Argyle Terrace, Irvington 11, N. J.

▲ For more details circle NED-4475 on enclosed inquiry slip ▲

ELECTRICAL TAPE
manufactured by calendering process

Cloth-backed Polyken No. 163 electrical tape exceeds ASTM friction tape specifications eight ways. It has higher dielectric strength, provides better moisture barrier, has less bulk with equal strength, sticks quicker, stays cleaner, unwinds more easily, doesn't fray and sticks firmly to any clean surface. Not a friction tape, material has nonsticky clean black cloth backing and will not collect grime from exposure or handling.

Tape is packaged in either 60 or 82½-ft rolls ¾-in. wide or in 10-roll job pack which contains 600 ft of tape. Made by Polyken Industrial Tape Dept., Bauer & Black Div., **Kendall Co.**, 222 W. Adams St., Chicago 6, Ill.

▲ For more details circle NED-4476 on enclosed inquiry slip ▲

BETTER EQUIPMENT PROTECTION
LOWER MAINTENANCE COSTS...
BY CHANGING TO

PLASTILUBE
THE SUCCESSOR TO GREASE

★ NEVER MELTS
★ NON-BLEEDING
★ MULTI-PURPOSE
★ WATER RESISTANT
★ BETTER ADHESION
★ PHASE MAINTAINED
★ BETTER PUMPABILITY
★ COSTS LESS TO USE

Cost-conscious firms now lubricate with PLASTILUBE—you can benefit like hundreds have by placing your order today.

THE Warren REFINING & CHEMICAL COMPANY
CLEVELAND 15, OHIO

The Warren Refining & Chemical Company
CLEVELAND 15, OHIO
DEPT. NED

Rush my sample of PLASTILUBE _____

Our 50th Anniversary Year

▲ For more details circle NED-4477 on enclosed inquiry slip ▲

Cut Production Costs . . .
Permit Ease of Assembly

HERE'S HOW
- Eliminate skilled labor in key seat cutting and key fitting operations.
- Are easy to assemble because of flat key bottom and starting radius.
- Key reaches deep into shaft and is firmly imbedded, enabling it to withstand greater strain.
- Offer greater resistance to shaft fracture due to shape of key set and permanent key fit.
- Simplify key seat cutting in tapered shafts.

Whitney Woodruff Type Keys are made to American Standard sizes and Whitney Standard sizes for special application. They are available from Whitney distributors throughout the country or write:

WHITNEY CHAIN CO.
203 Hamilton Street, Hartford 2, Conn.

▲ For more details circle NED-4478 on enclosed inquiry slip ▲

YOU CAN BE SURE.. IF IT'S Westinghouse

18 YEARS OF UPS AND DOWNS
but never "DOWN" once

A Westinghouse Motor and Speed Reducer pulls this car up and down the Duquesne Incline of Pittsburgh, Pa., at 5-minute intervals every day from 5:00 AM to 1:30 AM.

For 18 years, this speed reducer has required no service whatsoever other than an occasional lubrication check.

Service records such as this are routine for Westinghouse Speed Reducers. Combine gears of tough "Taper-hardened" BP Gear Steel riding on roller bearings, with simple, positive lubrication and you get a speed reducer that doesn't know when to quit. For more information, write for bulletin DB-3700-SR, Westinghouse Electric Corporation, Dept. 86, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-07293

Westinghouse GEARED DRIVES

▲ For more details circle NED-4479 on enclosed inquiry slip ▲

SAVES MONEY ON CRATING and CONSTRUCTION WORK

Atlas 10" TILT/ARBOR SAW

Here's the heavy duty, yet completely portable saw that's reducing crating and construction costs in plants all over the country.

The reason? The *big capacity* and *rugged ball-bearing construction* of the Atlas 10" bench saw. They give you *extra speed* and *accuracy* in making crates and boxes ...in wood manufacturing ...in cutting lumber for plant construction.

Weighing under 200 lbs., the Atlas can be transported by two men or dolly to any part of the plant—floor stand available. Your choice of 3 big table sizes: 25" x 22", 25" x 33¾", or 25" x 45½" as shown above. Depth of cut 3¼". There's 12¾" table working surface ahead of blade. Quick-positioning rip fence locks at *both* ends—has Vernier control for fine adjustment.

Write for full details on this rugged, cost-cutting saw.

Atlas Press Co.
623 N. Pitcher St.
Kalamazoo, Mich.

MATCHED PRECISION TOOLS FOR WOODWORKING AND METALWORKING

▲ For more details circle NED-4480 on enclosed inquiry slip ▲

The Relief Valve That Never Fails

LARGER DISCHARGE AREA
• EASILY ADJUSTED •
CONTINUOUS RELIABLE OPERATION

WON'T FREEZE

WON'T JAM

WON'T CHATTER

NO LEVERS • NO STUFFING BOXES
NO WEIGHTS

Write for a copy of Publication No. 4150

COCHRANE *Multiport*
BACK PRESSURE RELIEF VALVE

COCHRANE CORPORATION 3143 N. 17th St., Philadelphia 32, Pa.

For more details circle NED-4481 on enclosed inquiry slip

Only the THERMOSWITCH* CONTROL solves "push button" coffee maker's complex control problem

Automatically brewing coffee of the same high quality and unvarying flavor, the new Cory "Push Button" Coffee Brewing System involves exact control of coffee, water, infusion time and, most important, water temperature.

Tests proved that only a THERMOSWITCH Thermostat possessed the extreme sensitivity and instant response necessary to meet the Cory Coffee Maker's exacting requirements and load conditions.*

Chances are a standard THERMOSWITCH* unit will be fully adequate for your own applicational needs. If not, Fenwal will be glad to discuss your particular problem . . . and you'll find the cost of *all* THERMOSWITCH* controls surprisingly low!

FENWAL INCORPORATED
83 Pleasant Street, Ashland, Mass.
Temperature Control Engineers

Fenwal

WRITE FOR BULLETIN ON THE
THERMOSWITCH*
*Reg. U. S. Pat. Off.
The Precision Thermostat For Temperature Control and Detection
SENSITIVE . . . *but only to heat*

For more details circle NED-4482 on enclosed inquiry slip

MECHANICS KNOW THE DIFFERENCE!

between

THE HARD WAY *and the* ROTARY ELECTRIC IMPACTOOL WAY

Ratings Size 4U — 3/8" bolt dia. Size 8U — 5/8" bolt dia.

A mechanic wants and uses tools that make his job easier. Removing and running nuts is one of his most time-consuming and tiring operations. That's why the Ingersoll-Rand Electric IMPACTOOL is tops on his list of labor-aiding tools—it makes the tough jobs easy—it eliminates the kick and twist—even if the spindle is stalled completely there is no motor burn-out—and it saves as much as 90% on nut running time.

Runs Nuts • Taps • Reams • Drills Masonry • Wire Brushes • Drives Screws • Drives Studs • Saws Holes • Drills • Bores Wood • Extracts Broken Studs

The amazing I-R impact mechanism enables this remarkable tool to be used for many other time consuming operations. In fact, when you buy an Ingersoll-Rand Impactool you buy a *real multi-purpose tool,* one that is limited only by your ingenuity—Call your Ingersoll-Rand jobber or distributor and ask for a free demonstration of this amazing tool.

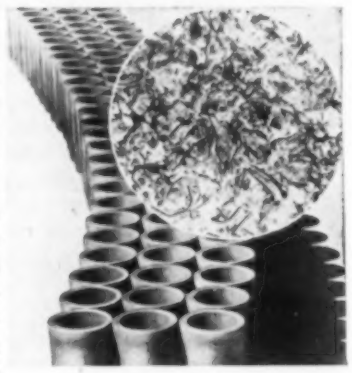
Ingersoll-Rand
11 Broadway, New York 4, N. Y.
ORIGINATOR OF IMPACTOOLS—air and electric

492-18

For more details circle NED-4483 on enclosed inquiry slip

New Processes & Materials

CYLINDER SLEEVE CASTINGS made by modified centrifugal method



Process utilized to produce A-4 cylinder sleeve liners combines best features of static casting method and conventional centrifugal method in which water - cooled molds are used. Requiring no annealing, castings are easily machined, free of dirt and neither porous nor subject to shrinkage. Out-of-roundness is held to maximum of 0.01-in. Inner and outer dimensions are within plus or minus 1/32-in., and length is within plus or minus 1/64-in. Illustration contains photomicrograph magnifying 250 times the structure of inside surface of sleeve superimposed over group of cylinder sleeve liners. Black flakes are graphite with gray areas being matrix of pearlite. Sharply outlined white areas are small carbides or phosphides. Made by **Perfect Circle Corp.,** Dept. A, S. Washington St., Hagerstown, Ind.

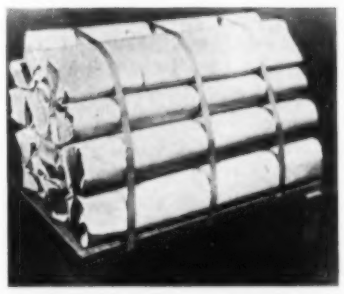
For more details circle NED-4484 on enclosed inquiry slip

HEAT RESISTANT PAINT withstands temperatures to 1200°F

Formulated to protect metals subject to temperatures ranging from 500° to 1200° F, Tecosteel heat resistant aluminum paint can be applied same as ordinary paint and requires no primer. It can be brushed, sprayed or dipped; air dries in 12 to 18 hours and can be baked dry at 350° F in 15 minutes. Because of its durability under heat, it is recommended for use on annealing boxes and furnaces, hot smoke stacks, air ducts and superheated steam lines. Made by **Thompson & Co.,** 1085 Thompson Ave., Oakmont, Pa.

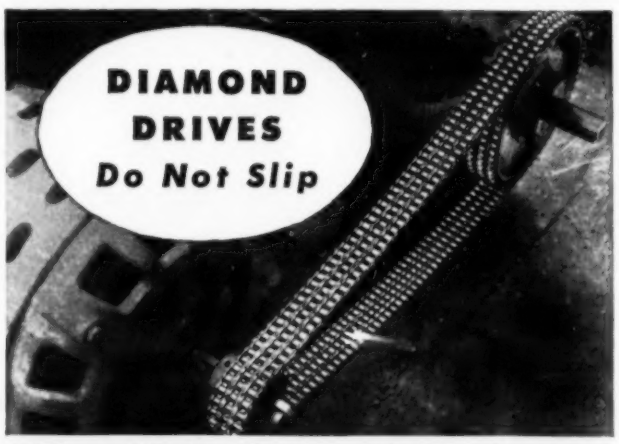
For more details circle NED-4485 on enclosed inquiry slip

PRESSURE-SENSITIVE TAPE spun-glass threads afford strength



Recommended for packaging, bundling, shipping and storing, Fiberglas reinforced Permacel-15 pressure-sensitive industrial tape has tensile strength of 200 psi which is ample for bundling metal pipes, prefabricated steel parts and other heavy materials. Strong fine spun-glass threads are sealed to tough kraft paper backing with adhesive coating to provide strength and flexibility. Average adhesion is 27 oz per inch of width and caliper is 0.012-in. Made by **Industrial Tape Corp.,** Dept. R, New Brunswick, N. J.

For more details circle NED-4486 on enclosed inquiry slip



• Diamond Roller Chains are ideal for drives of a wide range of capacities—on short or long centers, —slow or high speeds,—and various speed ratios. There is no slippage,—speeds of driven shafts can be held accurately. Diamond Drives do not depend on friction,—therefore high speed ratios present no problem,—and bearing pressures are low. Write today for comprehensive Chain and Stock Sprocket Catalog 709. DIAMOND CHAIN COMPANY, Inc., Dept. 457, 402 Kentucky Ave., Indianapolis 7, Ind.

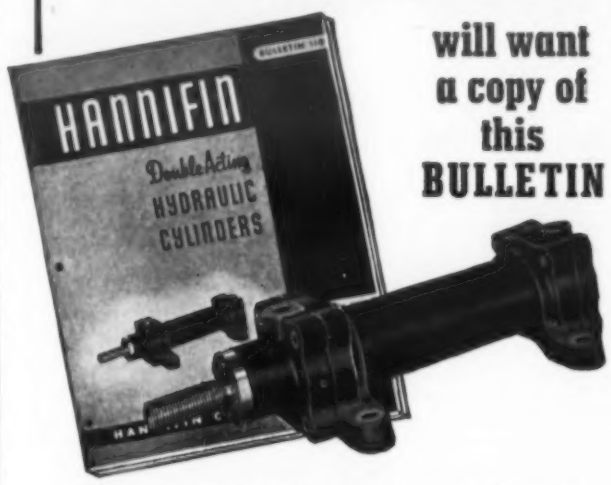
Offices and Distributors in all principal cities

Refer to the classified section of your local telephone directory under the heading CHAINS or CHAINS-ROLLER

DIAMOND ROLLER CHAINS

For more details circle NED-4487 on enclosed inquiry slip

EVERY ENGINEER will want a copy of this BULLETIN



It's easy to get the right answer for even the most special jobs when you use Hannifin's new hand-book on HYDRAULIC CYLINDERS. 52 pages of helpful specification and engineering data, complete with diagrams and dimensions. The Hannifin line is complete! 12 standard bore diameters, 1" to 8" . . . any length stroke you specify . . . 11 standard mounting styles . . . standard, double end or heavy duty (2:1) piston rods . . . available with adjustable cushions . . . pressures to 1500 lbs. per sq. in. Special types to order. Write for Bulletin 110.

HANNIFIN CORPORATION
1127 S. Kilbourn Ave., Chicago 24, Ill.

For more details circle NED-4488 on enclosed inquiry slip

FLAME-CUTTING . . . EASIER, FASTER

CUT-O-MATIC

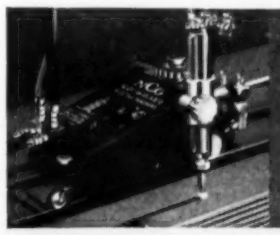
NCG's PORTABLE Motor-Driven Cutting Machine

So portable you can carry Cut-O-Matic to the work to cut plate or sub-assemblies. Weighs only 50 pounds.

So efficient that grinding or machining are rarely necessary. Cuts are sharp, clean and smooth.

So versatile you can cut light plate or heavy slabs—straight lines, bevels, circles, and shapes. And accessories are available that further extend its uses—including a two-torch mounting for strip, flange and double bevel cutting.

There are so many worthwhile Cut-O-Matic features that you'll want to write immediately for the free illustrated booklet describing this unit in detail. A demonstration right in your own shop can be arranged by your nearest NCG office or authorized NCG dealer.



CUT-O-MATIC STANDARD UNIT
$185
Plus freight

Write for Illustrated Booklet N-134

NATIONAL CYLINDER GAS COMPANY
Pioneers in Electric Welding since 1920
846 North Michigan Avenue • Chicago 11, Illinois

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EVERYTHING FOR WELDING

Copr. 1950, National Cylinder Gas Co.

For more details circle NED-4489 on enclosed inquiry slip

Completely New!

An Entire Series of NEW, SMALL ROTARY SWITCHES By "Diamond H"

Series 240 Switches

Single Hole Mounting Model Shown 1 1/2" high x 1 1/4" wide x 1" deep AND Attractive Bezel-equipped Models for snap-in mounting.

Both Types Available For Many Conventional And Special Circuits

THE NEWEST . . .

4 Heat, 5 Position, Double Pole, Series Parallel
15 A., 125 V.; 7½ A., 250 V., A. C. Only
Also Higher Ratings
Underwriters' Laboratories Approved

NO OTHER SWITCH WILL GIVE YOU ALL THESE LONG-WANTED FEATURES

- *Compactness* — unmatched by any other switch.
- *Heat Resistance* — completely efficient operation with ambient temperatures up to 400°F.
- *Entirely Enclosed*—for safety's sake and protection of working parts.
- *High Overload Capacity* — ratings are conservative.
- *Proven Peak Performance* — thanks to long recognized "Diamond H" slow-break principle and heavy silver contacts.
- *Long Service Life* — because of ingeniously simple design and rugged construction.

Write today for complete details on "Diamond H" Series 240 Switches for your applications.

THE HART MANUFACTURING COMPANY
204 Bartholomew Ave., Hartford, Conn.

For more details circle **NED-4492** on enclosed inquiry slip

Abart SMALL SPIRAL BEVEL *GEARS*

precisely cut to your needs

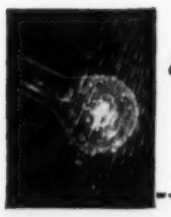
Each Abart Gear is accurately cut to meet the individual requirements of the work it must perform. NO STOCKS. Abart Gears are long-life — dependable — economical. Available in any gear material metallic or non-metallic. Send B/P, specifications or drawings today for prompt quotation. Our engineers will assist with any special problem.

WRITE TODAY FOR NEW ABART GEAR BULLETIN.

Abart GEAR & MACHINE CO.
4822 W. 16th St. Chicago 50, Ill.

For more details circle **NED-4493** on enclosed inquiry slip

3 ways you save on lighting costs



1. AMPLEX "WEATHERCOTE" LAMP. Cuts lamp mortality up to 75% where moisture, steam or outdoor weather kill ordinary lamps – costs just a fraction more.

←Water test shows "Weathercote" reliability

2. AMPLEX DOUBLE DUTY LAMP. Perfect for high bay and other hard to reach locations. A money-saving, extra-service, longer life lamp that cuts replacements almost in half.

3. AMPLEX REFLECTOR LAMP. Delivers more light on the work area. Its pure-silver-lined sealed beam reflector maintains maximum brilliancy for the life of the lamp.

Write for catalog and sample lamps to Amplex Corporation, Dept.36,113 Water Street, Brooklyn 1, N. Y.

amplex

INDUSTRIAL INFRA-RED HEAT LAMPS • STREET LAMPS • FLUORESCENT LAMPS ROUGH SERVICE LAMPS • VIBRATION SERVICE LAMPS.

For more details circle **NED-4494** on enclosed inquiry slip

New Processes & Materials

PLASTIC FORMS & PACKAGES
custom molded to specifications

Molded plastic forms and packages bearing extra strength and unusual clarity can be produced by Tuformit process. It is particularly adaptable to special specifications involving thin wall boxes, dust covers, plastic displays and specialized packaging units or components. Use of plastic sheet stock processed in fiber molds results in transparency, special heat treatments of heavier stock produce strength and toughness, and smooth and attractive surface is derived from steam table heating process which eliminates checks and line marks. Items can be from 0.010 to 0.125-in. thick and in almost any length. Sample service is offered by **Tut, Inc.**, Dept. A, 230 Gordon Bldg., Auburn, N. Y.

For more details circle **NED-4495** on enclosed inquiry slip

DIAMOND ABRASIVE KIT
contains six different types

Experimental and developmental work in application of diamond abrasives to producing any desired finish on carbides, tool steels and other hard materials is facilitated by use of this Dymo diamond abrasive kit. It contains most widely used Bureau of Standards grades of diamond compounds and is recommended for developing mass production finishing techniques, high precision lapping, plastic mold polishing and metallurgical specimen preparation. Each grade is distinctly color identified and contained in jars with matching color tops. Precision graded particles of pure diamond are permanently suspended in synthetic vehicle to assure maximum cutting action. Made by **Elgin National Watch Co.**, Industrial Products Div., 932 Benton St., Elgin, Ill.

For more details circle **NED-4496** on enclosed inquiry slip

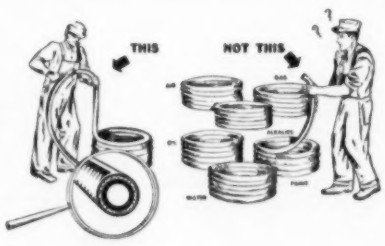
PACKAGING MATERIAL
is flexible corrugated wrap

Now available in red, green and blue in addition to white, Chippaflex flexible corrugated packaging material permits identification of products by color as well as providing protection for them during shipping. Recommended uses include protecting photographs, blueprints, artwork, catalogs and manuscripts sent through mail. It also helps manufacturers speed materials handling by providing positive package identification. Material can be obtained in rolls of 6 to 72 in. wide as well as in flat sheets of various sizes. Made by **Chippewa Paper Products Co.**, Dept. D, 3315 W. 48th Place, Chicago 32, Ill.

For more details circle **NED-4497** on enclosed inquiry slip

MULTIPURPOSE HOSE
¼ to 1-in. ID sizes are obtainable

Air, water, gas, oil, grease, paint, insecticides, alkalies, oxygen, solvents and many other liquids can be handled by Vari-Purpose hose which is available in ten types and sizes. It incorporates tube compound to resist reactions of various elements, braided Du Pont Cordura rayon carcass, and cover which is resistant to oil and abrasion. Features include ample strength to withstand working pressures, lightness in weight, extreme flexibility, and wide serviceability at low unit cost. Made by **Carlyle Rubber Co.**, 62-E Park Place, New York 7, N. Y.



For more details circle **NED-4498** on enclosed inquiry slip

Lower Your Carbide Grinding Costs with CRYSTOLON WHEELS in the New K-Bond

A faster and freer cutting action combined with greatly increased uniformity in grinding action — this is what you get with the new Norton K-Bond, a new vitrified bond for CRYSTOLON grinding wheels, both green and gray. The high rate of stock removal and the cool cutting action of the new K-Bond speed up the grinding operation and help eliminate spoiled tools — thus they reduce the over-all grinding costs.

In plant after plant, the new K-Bond CRYSTOLON wheels are showing remarkable results. You will want to try them.

NORTON COMPANY, WORCESTER 6, MASS.

For more details circle **NED-4499** on enclosed inquiry slip

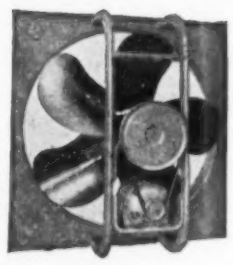
Over 150 different sizes and models!

CHELSEA FANS

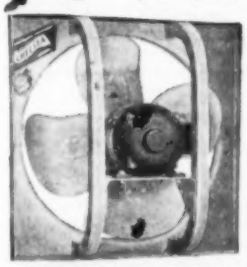
—for every requirement!

Specifying Chelsea Fans for every installation is one sure way to proper ventilation. There's a Chelsea model for every requirement, each type certified as to performance in accordance with the Code of Propeller Fan Mfrs. Assn.

Chelsea Industrial Type IND
For large general area ventilation. Moves large volumes of air under pressure, overcoming high resistance in hoods and ducts. Sizes from 24" to 60".



Spin-It-Fans, 16" and 22"
A new idea in window fans—reversible for drawing-in or exhausting air. Two speed, for cooling and ventilating, and subsequent operation. Fit window sizes up to 36" width.



All-Purpose Fan Type BB
For removing smoke, steam, heat, fumes, etc. Heavy duty, direct drive fan for continuous operation. Recommended for use against static pressure. Simple to install. Sizes from 10" to 30".

SEND FOR FREE CONTRACTOR'S KIT!

Contains all the information you need to make ventilating and cooling installations in factory, store, office or home —selection of proper fan, installation hints, etc. No obligation—write Department G.

CHELSEA FAN & BLOWER CO., INC.
1206 GROVE ST., IRVINGTON, N. J.

For more details circle **NED-4500** on enclosed inquiry slip

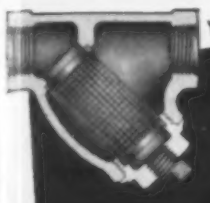
Truscon Vertical Lift Steel Doors

QUICK, QUIET... FOR SMALL OR BIG OPENINGS

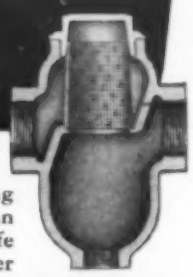
The door requirements of garages, warehouses, loading platforms, factories and other commercial structures can be served with high efficiency by Truscon Vertical Lift Doors. The flick of a finger starts the electrically-powered door leaves sliding vertically upward, with silent speed, to any height desired. The bottom leaf rests behind the plane of the top leaf, and moves simultaneously with it but at twice the speed. Strong construction of hot-rolled new billet steel provides durability to resist crashes and other accidental injury. Write for illustrated literature describing types and sizes available.

TRUSCON STEEL COMPANY Subsidiary of Republic Steel Corporation
YOUNGSTOWN 1, OHIO • Warehouses and sales offices in principal cities

For more details circle **NED-4501** on enclosed inquiry slip



Keep Piping Systems Clean with CRANE Sediment Separators



Safeguard against damage from dirt, grit, and scale in your pipe lines by installing Crane Sediment Separators. They more than pay for themselves in increased service life of valves, automatic machinery and other flow control equipment.

Crane Sediment Separators have an extra large screening area that assures free fluid flow with minimum pressure loss. Not only do they effectively trap all foreign matter, they also furnish a pocket for its accumulation. Periodic blowing out is only maintenance needed. All internal parts readily accessible.

Crane Sediment Separators are made for working pressures up to 600 pounds steam. Iron patterns in sizes up to 12-in.; steel patterns, to 1¼-in. Screwed or flanged ends. See your No. 49 Crane Catalog, or WRITE FOR CIRCULAR AD-1638.

CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE *Everything for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

For more details circle NED-4502 on enclosed inquiry slip

Your EXTRA Advantages in specifying CLEVELAND Fasteners:

Extra high manufacturing standards,
Extra wide range of sizes,
Extra fast delivery.
. . . advantages that spring from

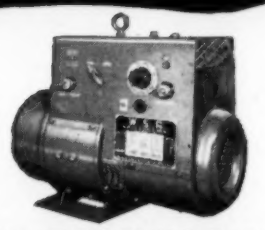
CLEVELAND'S SPECIALIZATION
in Cap Screws, Set Screws, Milled Studs

CLEVELAND Top Quality FASTENERS

THE CLEVELAND CAP SCREW COMPANY
2917 EAST 79TH STREET • CLEVELAND 4, OHIO
Warehouses: Chicago, Philadelphia and New York
Ask your Jobber for Cleveland Fasteners

For more details circle NED-4503 on enclosed inquiry slip

Here's the Outstanding DC Arc-Welder Development of All Time



Just Check These Features:

- COMPACT DESIGN—uses little or no floor space.
- GREATER MOBILITY — only 695 lbs.
- LOWEST RPM PER POUND OF WEIGHT.
- DIAL-LECTRIC CONTINUOUS CONTROL.
- REMOTE CONTROL — full arc control at the work.
- QUIET—you hardly know it's running.
- POLARITY SWITCH — an extra feature at no extra cost.
- DUAL-FAN COOLING SYSTEM—the coolest welder you have ever seen.
- HIGH-LOW RANGE — requires only a flip of a switch.
- PUSH-BUTTON START AND STOP SWITCH — overload protection.
- CLASS B GLASS INSULATION — highest quality available.

The New P&H NEMA-Rated Model WFA 300
(Welding Service Range 60-375 amps)

Here's the only DC Welder with time and money-saving Dial-lectric control — a compact, light-weight unit that runs at the life-preserving speed of 1800 rpm.

If you are looking for a DC welder that can reduce your welding costs, your best bet is a P&H WFA machine.

Get all the facts about this new, outstanding DC Welder. Contact your nearest P&H representative or write us for latest literature.

P&H ARC WELDERS
4537 W. National Ave.
Milwaukee 14, Wisconsin
HARNISCHFEGER CORPORATION

For more details circle NED-4504 on enclosed inquiry slip

New Literature and Catalogs

Carbide Tipped Tools

Whitman & Barnes—28-page illustrated catalog No. 104 lists and gives available sizes of taper shank, jobbers' wire gage and letter size, glass and core drills; lathe centers; straight and taper shank, stub screw machine, jobber, dowel pin and shell reamers; and machine countersinks. All tools are carbide tipped.

For more details circle NED-4505 on enclosed inquiry slip

Swivel Coupling

Gil-Lair Products, Inc.—Design features, complete specifications, working pressures and prices of line of high and low-pressure All-Flex ball bearing swivel pipe couplings are given in illustrated catalog No. 50. Line includes eight basic styles in sizes from ⅜ to 12 in. for pressures from vacuum to 12,000 psi.

For more details circle NED-4506 on enclosed inquiry slip

Industrial Knives

Taylor-Stiles & Co.—11-sheet loose-leaf illustrated catalog and 4-page illustrated folder discuss available types of knives for use on industrial cutting equipment. Types include fly, planer, irregular edge and molding knives in solid and laid carbon steel, high speed steel and Stellite or Colmonoy constructions.

For more details circle NED-4507 on enclosed inquiry slip

Materials Sprayer

Stewart-Warner Corp., Alemite Div.—16-page illustrated booklet "Here's Something Really New" explains some of the many uses of the Versatal pump which facilitates spray application of almost every type of material from licorice to roofing and from cake frosting to heaviest sound-deadening materials.

For more details circle NED-4508 on enclosed inquiry slip

Drying Cylinders

Sarco Co.—How to reduce warm-up time on slashers, dry cans and other textile dryers using the new Sarco system of air venting and draining rotating cylinders is explained in 8-page illustrated technical bulletin No. 2.

For more details circle NED-4509 on enclosed inquiry slip

Lighting Guide

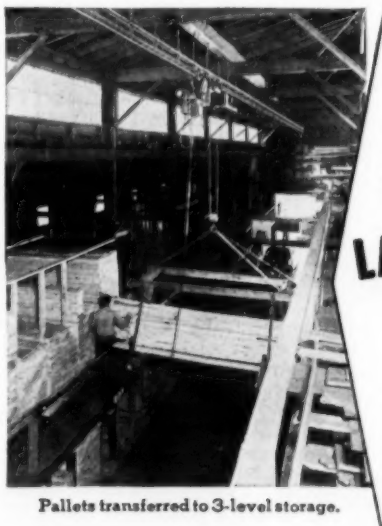
Benjamin Electric Mfg. Co.—32-page illustrated "Planning Guide to Improved Plant Lighting" details economics of planned lighting program in terms of reduced production costs. Six fundamental steps in instituting a lighting plan are outlined. Third section is guide for selection of equipment and layouts which can be employed to advantage.

For more details circle NED-4510 on enclosed inquiry slip

Shear Knives

Heppenstall Co.—48-page illustrated "Shear Knife Handbook" discusses shear knife manufacture, outlines research and development of new knives, and contains grade listing of available types. Recommendations are given to aid in selection of correct knife for specific cutting operation. Described are sheet, bar, slitter, half slitter, sheet bar, structural, flash trimmer, rotary and pinch knives.

For more details circle NED-4511 on enclosed inquiry slip


Pallets transferred to 3-level storage.

LUMBER STORAGE LABOR COST CUT IN HALF

Due to three storage levels in this lumber warehouse, normal requirements would necessitate 4 men. With the American MonoRail System only 2 men are required to handle pallets from unloading dock to storage . . . labor cost on this operation is cut in half. This is just another of the hundreds upon hundreds of cases where American MonoRail Overhead Handling Systems cut cost of materials handling. Your American MonoRail engineer can show you how it will effect savings in your plant.

Send for Bulletin C-1

THE AMERICAN MONORAIL COMPANY
13116 Athens Avenue • Cleveland 7, Ohio

For more details circle NED-4512 on enclosed inquiry slip

LYON-Raymond SPACEmaker Electric Tiering Trucks

Right angle tiering in a 6 ft. aisle with a SpaceMaker.

SHORT LENGTH
Will right angle stack in 5' to 6' aisles.

LIGHTWEIGHT
Desirable on elevators and upper floors.

MAGIC MANEUVERABILITY
Increases space making characteristics and adds to usefulness.

• Now — You can tier skid and pallet loads from narrow hand-truck aisles. This new SpaceMaker right-angle stacks in aisles only 2 ft. wider than load length!

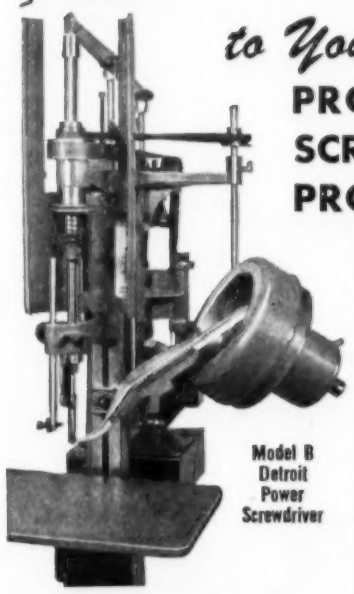
Write for BULLETIN 701

LYON-Raymond CORPORATION
Electric Power Trucks . . . Skid and Pallet Lifts
Hydraulic Elevating Equipment
Positioning . . . Sheet and Die Handling

4129 Madison St. GREENE, N.Y.

For more details circle NED-4513 on enclosed inquiry slip

THIS NEW CATALOG- has all the Answers-


Model B Detroit Power Screwdriver

to Your **PRODUCTION SCREWDRIVING PROBLEMS**

It's alive with illustrations and descriptions of invaluable time-saving aids: **POWER SCREWDRIVERS** that drive all types of screws as fast as one a second, without stripping of threads or marring of heads, all driven to uniform tension, 3 models . . . **Also Fixtures, Nut Drivers, Hopper Units and Special Assembly Machines.** Modern necessities that will materially cut production costs.

MOTORIZED HOPPER UNITS

Sturdy efficient machines, easily adapted to Presses, Centerless Grinders, Thread Rolling and Slotting Machines or Special Machines. They will feed Screws, Screw Blanks, Rivets, Pins, Discs, Nuts, Bearing Rollers, Steel Balls, Washers and miscellaneous items. 6 sizes: 8", 10", 12", 16", 24" and 30" diameters.

Mail Coupon for Catalog

DETROIT POWER SCREWDRIVER CO.
2819 West Fort St., Detroit 16, Michigan
Yes, send along your new catalog . . . sounds interesting.
COMPANY NAME _____
STREET ADDRESS _____
CITY _____ STATE _____

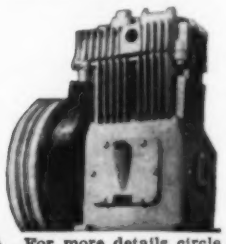
For more details circle NED-4514 on enclosed inquiry slip

DOES YOUR PRODUCT NEED

Dependable Compressed Air Supply?

SELECT QUINCY COMPRESSORS

When a product "needs something" to make it just right . . . consider compressed air. Hundreds of manufacturers use Quincy Compressors as a part of their own product . . . and in their plant operation. Quincy manufactures a complete line of both air and water cooled units in a variety of mountings. Get FREE catalog.



Quincy COMPRESSORS

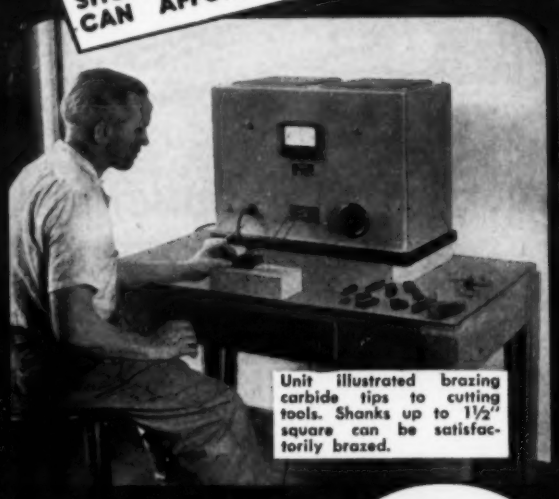
QUINCY COMPRESSOR CO.
Dept. NE-60, Quincy, Illinois

For more details circle NED-4515 on enclosed inquiry slip

LEPEL offers a New

LOW COST High Frequency HEATING UNIT

AT A PRICE SO LOW THAT NO MACHINE SHOP, TOOL ROOM OR LABORATORY CAN AFFORD TO BE WITHOUT IT!



Unit illustrated brazing carbide tips to cutting tools. Shanks up to 1½" square can be satisfactorily brazed.

• SMALL and COMPACT
Conveniently operated on bench or table—no mounting necessary.

• ECONOMICAL OPERATION
No special power installation required. Operates on 110 volts, 60 or 50 cycle line at unity power factor.

• FULLY GUARANTEED
Guaranteed for continuous duty cycle and stated performance.

• LOW COST
Complete unit with line connection and load coil $780.00 f.o.b. factory

DOES ALL THESE JOBS Faster, Better and Cheaper
BRAZING, SOLDERING HARDENING, ANNEALING DRAWING AND MELTING

WILL HEAT TO 1500 F.

⅛" steel rod 1" length in approx.	1 second
¼" " " " " "	3 seconds
½" " " " " "	15 seconds
1" " " " " "	60 seconds

Will melt 4 ounces of brass or steel in 4 minutes.
Equally well suited for heating of non-ferrous metals.

HARDEN SOLDER Lepel HIGH FREQUENCY HEATING UNITS BRAZE MELT

LEPEL HIGH FREQUENCY LABORATORIES, Inc., 39 West 60th Street, New York 23, N. Y.

For more details circle NED-4516 on enclosed inquiry slip

New Literature—Continued

Phenolics, Resins & Cements

Borden Co., Chemical Div.—Durite phenolic molding compounds, industrial resins and cements are described in 8-page illustrated booklet "Durite." Various types available, applications and typical products are covered.

For more details circle NED-4517 on enclosed inquiry slip

Shipping Room Packaging

Bostitch—Varied shipping room problems are discussed in 6-page illustrated form PTG 267. Described are machines for top sealing, assembling, bottoming, bag sealing, tacking, etc.

For more details circle NED-4518 on enclosed inquiry slip

Petroleum Products Pumps

William M. Wilson's Sons Inc.—12-page illustrated circular is descriptive of Gasboy, Keroboy, Oilboy and Rotaboy pumps for gasoline, kerosene, lubricating oil and general uses, respectively. Electric, rotary and stroke types are covered.

For more details circle NED-4519 on enclosed inquiry slip

Laboratory Apparatus & Supplies

Schaar & Co.—Apparatus and equipment primarily for research and routine use in chemical and biochemical laboratories are presented in catalog No. 50. Publication is alphabetically arranged to facilitate reference.

For more details circle NED-4520 on enclosed inquiry slip

Conveyor Systems

Logan Co.—36-page illustrated manual "The Key to Lower Costs" is guide to line of roller, apron, wheel and belt conveyors; ball transfers; pusher-bar and vertical lifts; Aligator switch and variety of slides and chutes. Typical handling problems are discussed, and functions of main types of conveyors are listed.

For more details circle NED-4521 on enclosed inquiry slip

Radioactivity Instruments

Nuclear Instrument & Chemical Corp.—40-page illustrated catalog K contains data on line of scaling units, counting systems, monitoring instruments, detectors and accessories to aid in radioactivity research.

For more details circle NED-4522 on enclosed inquiry slip

Pressure Regulating Valves

Swartwout Co.—Complete line of low-pressure regulating valves for controlling gases and liquids in level, temperature or pressure requirements are described in 12-page illustrated bulletin S-22-C. Pressure master controls are also presented.

For more details circle NED-4523 on enclosed inquiry slip

Fans & Blowers

Chelsea Fan & Blower Co.—22-page illustrated catalog "Fans & Blowers" gives full engineering information, dimensions and prices of all types and sizes of fans for industrial and commercial applications. Described are direct-drive or belt-driven window fans, industrial pressure fans, mancoolers, penthouse unit, duct booster fans and automatic counterbalanced shutters.

For more details circle NED-4524 on enclosed inquiry slip

Die Cushions

Clearing Machine Corp.—26-page illustrated bulletin 212 covers pneumatic and hydropneumatic cushions for all makes of power presses. Helpful data for use in planning installations and on operation of cushions in general are included.

For more details circle NED-4525 on enclosed inquiry slip

Protective Coating Resin

Hercules Powder Co.—20-page illustrated catalog "Polypale Resin" describes use of this polymerized resin in protective coatings. It is usable in esters, varnishes, metal resinates, gloss oils, and tung-oil and other products.

For more details circle NED-4526 on enclosed inquiry slip

Investment Casting

Austenal Laboratories, Inc., Microcast Div.—16-page illustrated booklet "New Horizons with Microcastings" includes specifications and applications of precision investment casting process as well as explanation of Microcast process itself.

For more details circle NED-4527 on enclosed inquiry slip

Jacketed Pipe & Fittings

Hetherington & Berner Inc.—Cast iron or steel and welded steel jacketed pipe and fittings are subject of 8-page illustrated bulletin J-50. Fittings are designed with double wall completely surrounding and insulating interior line.

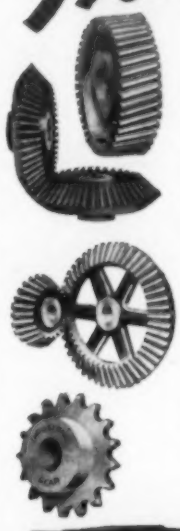
For more details circle NED-4528 on enclosed inquiry slip

Spray Nozzles & Accessories

Delavan Mfg. Co.—Selection of proper spray nozzle and accessories for industrial and air conditioning applications is facilitated by illustrated catalog 30. List of recommended uses is indicated for each type of nozzle, spray characteristics are described, and performance ratings are charted.

For more details circle NED-4529 on enclosed inquiry slip

"Industrial Gear"

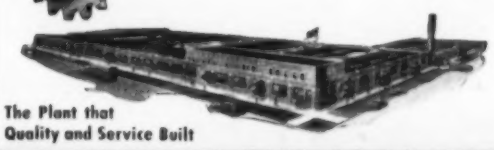


AN ORGANIZATION BUILT TO RENDER EXCEPTIONAL SERVICE ON SPECIFICATION-CUT GEARS - RACKS - SPROCKETS

What "Industrial Gear" offers:

• Large modern plant fully equipped with the most up-to-date Lathes - Millers - Hobbers - Generators - Thread Grinders - etc., for efficient precision production.
• Years of Experience.
• Day and Night Operations.
• Skilled Workmanship
• Engineering Advice
• Quality Control of all Materials.
• Rigid Inspection.

You'll find "Industrial Gear" a mighty fine organization to deal with. Write for "A Pictorial Trip Through Industrial Gear".



The Plant that Quality and Service Built

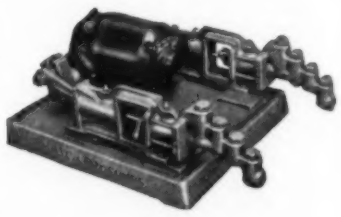
INDUSTRIAL GEAR MFG. CO.
4541 VAN BUREN STREET CHICAGO 24, ILLINOIS

For more details circle NED-4530 on enclosed inquiry slip

MILTON Roy PUMPS

• for Controlled Volume Pumping
• for Pumping in Small Volumes
• for Pumping at High Pressures
• for Handling Difficult Materials
• for Pumping Corrosive Chemicals

Select Milton Roy Pumps for the above applications . . . pumps that are non-clogging and self-cleaning . . . positive displacement, precise metering units that handle everything from slurries and solids in suspension to the lightest solvents, hot or cold . . . pumps with liquid ends to meet practically every corrosion resistant problem and to pump up to 20 thousand psi for high pressure catalysis and hydrostatic testing.



Investigate. Ask for Catalog 146.

MILTON Roy COMPANY
1304 E. MERMAID LANE, CHESTNUT HILL, PHILA. 18, PA.

For more details circle NED-4531 on enclosed inquiry slip

ONLY ONE MOVING PART..

A small, stainless steel valve that floats on the condensate load... keeps maintenance at a minimum. Continuous discharge under heavy loads, frequent under light loads, gets equipment hotter, sooner and keeps it hot. Over 600,000 Yarways already installed. Sold by distributors throughout the world.

YARNALL-WARING CO. 131 Mermaid Ave., Phila. 18, Pa.

For more details circle NED-4532 on enclosed inquiry slip

Arcos Oxyarc Process for cutting
Cast Iron • Stainless
Stainless Clad
Alloy Steels
Aluminum
Bronzes and Brasses
Monel—Inconel
Nickel—Mild Steel

All of the "tough" metals can be cut with Oxyarc easily and at low cost. Cutting is done by a pin point of tremendous heat generated by an electric arc and a stream of oxygen fed through the tubular Oxycuttend rod. Can be used with either AC or DC current.

Oxycuttend rods and Oxyarc holders available from your nearby Arcos distributor.

WELD WITH ARCOS

ARCOS CORPORATION
1500 South Fiftieth St., Philadelphia 43, Pa.

Specialists in Stainless, Low Alloy and Non-Ferrous Electrodes

For more details circle NED-4533 on enclosed inquiry slip

NEW

Mono-Cushion

Cushion all the way through

No cushion tire does a better job of soaking up bumps and jolts than Mono-Cushion. Rubber especially compounded for resilience plus contour designed for maximum shock absorption does the trick.

Tough all the way through

This baby is *all* muscle—resilient, highly wear-resistant rubber right down to the rim. Mono-Cushions are built with plenty of beef, designed with just one thing in mind: To knock a big chunk off your tire costs.

adds up . . .

. . . to an easy ride for drivers, less breakage in loads, less vehicle maintenance, lower tire costs.

The leading manufacturers of industrial trucks use Mono-Cushions as original equipment. Replacements available from the manufacturer of your equipment or his service branches.

THE **MONARCH** RUBBER COMPANY
200 LINCOLN PARK • HARTVILLE, OHIO

For more details circle NED-4534 on enclosed inquiry slip

New Literature—Continued

Rubber-Lined Pumps

Allis-Chalmers Mfg. Co.—16-page illustrated bulletin 08B7311 is descriptive of type SRL rubber-lined centrifugal pump for handling liquids with solids of 325 mesh to ⅛-in. diameter. It is available in open and closed non-choke impeller types and in four sizes of each.

For more details circle NED-4535 on enclosed inquiry slip

Shock Absorbing Pads

Fabreeka Products Co.—Shock absorbing and vibration isolating qualities of Fabreeka pads are outlined in 4-page illustrated circular "Fabreeka for Impact Shock, Vibration and Noise." Composed of layers of twisted closely woven lightweight cotton duck cloth, impregnated with special rubber compound, pads are usable as machine mountings or as component parts.

For more details circle NED-4536 on enclosed inquiry slip

Turbine Driven Unit Heater

L. J. Wing Mfg. Co.—Design and construction details of revolving and fixed discharge units are contained in bulletin "Wing Turbine Driven Unit Heater." Heater is driven by steam turbine, exhaust being piped into heater section for heating the air.

For more details circle NED-4537 on enclosed inquiry slip

Cold Heading Methods

Continental Screw Co.—Advantages of cold heading over machining in production of fasteners are related in folder titled "Cold Heading Hints for Reducing Fastener Costs." Correct methods of specifying cold headings are explained and descriptive diagrams presented.

For more details circle NED-4538 on enclosed inquiry slip

Small Motors

Barber-Colman Co.—"Barcol Motors" is title of file folder containing data sheets on line of small unidirectional, reversible and synchronous motors for use in appliances, projection equipment, industrial instruments, communications equipment, advertising devices and toys.

For more details circle NED-4539 on enclosed inquiry slip

Automatic Clutches

Automatic Steel Products, Inc.—Three publications show and describe complete line of Mercury automatic clutches. Bulletin 216 presents general discussion of clutch and various applications, circular No. 217 deals with clutches applied to gasoline engines, and No. 218 covers electric motor installations.

For more details circle NED-4540 on enclosed inquiry slip

Acrylic Plastic Molding Powders

Rohm & Haas Co.—Illustrated with full-color photographs of molded end products, 16-page booklet "Plexiglas Acrylic Plastic Molding Powders" covers series of heat-resistant, medium-flow and general purpose formulations. Properties of various injection and compression molding powders are tabulated.

For more details circle NED-4541 on enclosed inquiry slip

Fasteners

Tinnerman Products Inc.—"Speed Nut Savings Stories" is title of volume of case histories describing significant economies effected by use of Speed Nut, Speed Clip and Speed Clamp fastening devices in variety of assemblies.

For more details circle NED-4542 on enclosed inquiry slip

with Pressure-Sensitive
KUM-KLEEN LABELS

For vital instructions right where they're needed...as long as they're needed...General Controls use pressure-sensitive *KUM-KLEEN* Labels.

KUM-KLEEN Labels are applied without moistening at production-line speed—stick and stay stuck, without popping or curling, even through extremes of heat and humidity. They adhere permanently to all hard-to-label surfaces—cellophane, glass, metal, plastics, etc. The on-the-product cost of *KUM-KLEEN* Labels is lower than other methods of labeling.

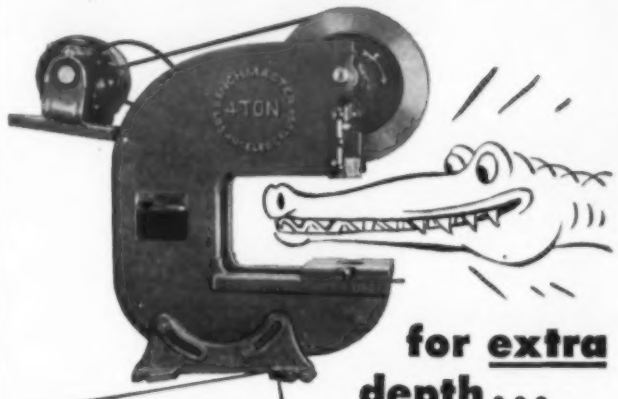
To affix installation and service instructions, diagrams, patent numbers and other vital data, use *KUM-KLEEN Labels.*

Kum-Kleen

SEND FOR DETAILS AND SAMPLES
ADDRESS DEPT. NED-6
AVERY ADHESIVE LABEL CORPORATION
MONROVIA, CALIFORNIA
Factory Branches in All Principal Cities

For more details circle NED-4543 on enclosed inquiry slip

Chee! Wot a throat!



for extra depth... get a benchmaster

Gives you extra REACH—right to the center of a 17½" circle!
Packed with POWER—4 tons concentrated in every stroke!
Built for STURDINESS—380 husky pounds of top performance!
Built for ECONOMY—Low initial cost—low upkeep!

Every way you look at it Benchmaster gives you the MOST for your Dollar! It's a press with proven performance. Get Reliability, Get Benchmaster! Made in 1 Ton, 4 Ton Standard, 4 Ton Deep Throat, and 7½ Ton models.

Free Literature! Write today! NED

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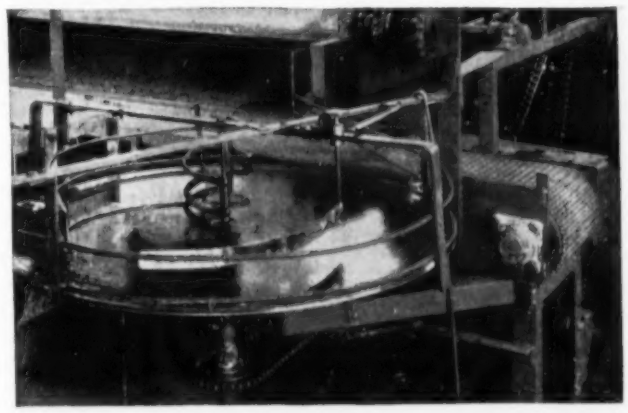
7953 WEST PICO BOULEVARD
LOS ANGELES 6, CALIFORNIA
WORLD'S LARGEST PRODUCER OF SMALL PUNCH PRESSES

For more details circle NED-4544 on enclosed inquiry slip

. . . METAL Conveyor Belts

ASHWORTH

Engineered and built by an organization of moderate size with the will and ability to analyze your problems and "Keep Your Product on the move."



WRITE FOR ILLUSTRATED CATALOG 47D

ASHWORTH BROS., INC.
METAL PRODUCTS DIV. • WORCESTER, MASS.

Sales Engineers located in Buffalo • Chicago • Cleveland • Detroit • Los Angeles • New York • Pittsburgh • Seattle

Canadian Rep., PECKOVER'S LTD. - Toronto - Montreal - Halifax - Winnipeg - Vancouver

For more details circle NED-4545 on enclosed inquiry slip

FEROX
T. M. REG. PAT. OFF.

Destroys Rust . . . Saves Metal

- *Amazingly effective . . . removes ALL rust!*
- *Prevents further rusting*
- *Acts quickly . . . removes rust in a matter of minutes*
- *Acts safely . . . harmless and non-inflammable*
- *Easy to use . . . no special skill or equipment required*
- *Economical . . . saves over 5 times its cost*

FEROX is highly concentrated. Used full strength, it removes the heaviest scale . . . and automatically inhibits further rusting indefinitely, under normal inside storage conditions. Extended with 1 to 10 parts water, it effectively removes rust from thin sections and intricate parts.

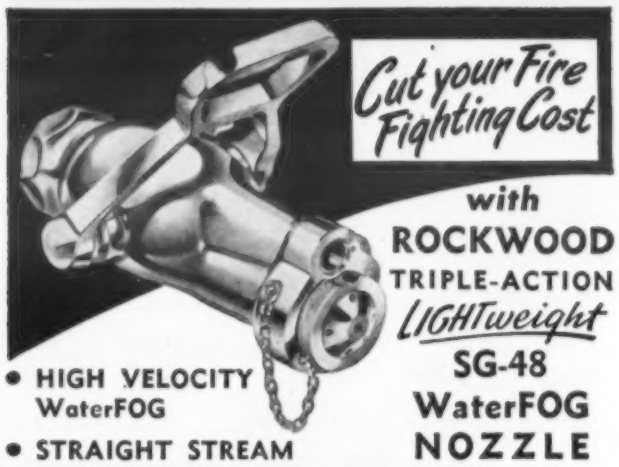
FEROX removes all rust in 10 to 20 minutes when heated; within 30 to 60 minutes when used cold. **FEROX** is non-inflammable and easy to use. Small parts are soaked in a tub until rust disappears. Large areas are rubbed with a coarse rag, steel wool or stiff bristled brushes dipped in FEROX.

FEROX does not cost. Prove without risk . . . that it pays for itself fast. Let us send you a 4 gallon trial unit of FEROX today ($16. F.O.B. Phila.). Try 2 gallons. If not thoroughly satisfied, return the balance within 30 days, transportation prepaid, and we will cancel the invoice. Remember, FEROX pays big dividends in valuable parts salvaged from rust. Get your trial unit now!

Department F

SERVICE INDUSTRIES
2103-05-07 E. SOMERSET STREET
PHILADELPHIA 34, PA.

For more details circle NED-4546 on enclosed inquiry slip



- HIGH VELOCITY WaterFOG
- STRAIGHT STREAM
- LOW VELOCITY WaterFOG from EXTENSION APPLICATORS

Extinguishes fires in flammable liquids and ordinary combustibles faster with less water. Protects firemen from fire, smoke and fumes. It also permits firemen to reach the very root of the fire and to attack it with less physical punishment.

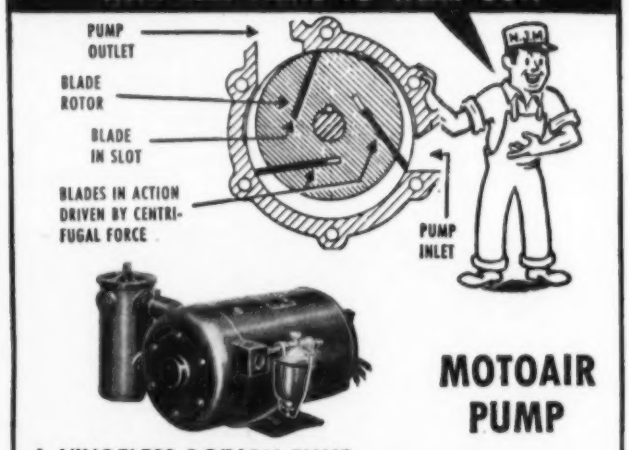
Designed for use in industrial plants, chemical plants, mercantile and public buildings, oil refineries, municipal fire departments, etc.

Write for bulletin C-501R

ROCKWOOD SPRINKLER CO.
44 HARLOW STREET WORCESTER 5, MASS.

For more details circle NED-4549 on enclosed inquiry slip

COMPACT VACUUM PUMP
WITH LESS PARTS TO WEAR OUT!



A HINGELESS ROTARY PUMP

BUILT FOR MACHINE DESIGNERS!

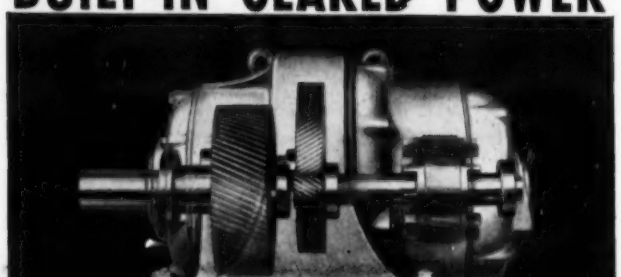
With mountings adjustable to any position—and overall size slightly longer than its motor—all in one housing with *no hinges, no gears, no belts* and no extended drive.

Ask for complete details

NEW JERSEY MACHINE CORPORATION
1530 Willow Ave. • Hoboken, N. J.
Factory offices in Chicago, Cincinnati, Los Angeles

For more details circle NED-4550 on enclosed inquiry slip

BUILT-IN GEARED POWER



U.S. SYNCROGEAR MOTOR
MULTIPLIED TORQUE WITH PYRAMIDAL STABILITY

U. S. Syncrogear motors are compact and dependable. Rugged pyramidal base withstands external stresses. Hardened gears are designed for high safety factor. Lubrication is positive. Single, double and triple reductions are available in sizes of ¼ to 30 h.p. Sealed against leakage.

10 to 10,000 RPM

U.S. ELECTRICAL MOTORS, Inc.
200 E. Slauson Ave., Los Angeles 54, Calif.
or Milford, Connecticut.

Free Bulletin

REQUEST FOR SYNCROGEAR BULLETIN
U. S. Electrical Motors, Inc. NE
200 E. Slauson Ave., Los Angeles 54, Calif.
or Milford, Connecticut.
NAME
COMPANY
ADDRESS
CITY ZONE STATE

For more details circle NED-4551 on enclosed inquiry slip

New Literature—Continued

Resins

American Cyanamid Co.—Revised "Resin Guide" tabulates specifications of resins for use in paints, varnishes, lacquers and printing inks. Described are various grades in each of the melamine, urea, alkyd, copolymer, phenolic and diabasic-acid families.

For more details circle NED-4552 on enclosed inquiry slip

Vibratory Feeders

Syntron Co.—Vibra-Flow furnace, infrared drying and other types of vibratory feeders as well as conveyors are described in 16-page illustrated bulletin "Special Vibratory Feeders." These units provide controlled yet adjustable rate of flow.

For more details circle NED-4553 on enclosed inquiry slip

Electric Meter Sockets

Code Electric Products Corp.—20-page illustrated bulletin "All Power to You" is descriptive of Code meter socket channel which affords accessible means for wiring electric meters.

For more details circle NED-4554 on enclosed inquiry slip

Glycerine Applications

Glycerine Producers' Association, Information Bureau—Four booklets, depicting uses of USP glycerine in fields of foods, drugs and cosmetics, alkyd resins and ester gums, and textiles present basic technical data of interest to chemists, engineers and research men as well as interesting facts for the nontechnical buyer. Fifth bulletin is general survey of glycerine uses.

For more details circle NED-4555 on enclosed inquiry slip

Circular Sludge Collectors

Ralph B. Carter Co.—16-page illustrated bulletin 4906 is guide to three different types of circular collectors for sedimentation clarification and sludge collection in sewage or industrial waste treatment and water purification. Complete engineering data, specifications, capacity tables and diagrams are included.

For more details circle NED-4556 on enclosed inquiry slip

Lithium Chemistry

Foote Mineral Co.—28-page illustrated booklet "Lithium in Modern Industry" reviews significant developments in lithium chemistry since 1940. Industrial applications of lithium compounds and salts and new uses of these materials are discussed.

For more details circle NED-4557 on enclosed inquiry slip

Carbide Tools

Super Tool Co.—64-page illustrated catalog No. 50 covers 48 types of carbide tipped and solid carbide tools. Included are milling cutters, counterbores, reamers, drills, ejector type tools, brazed single point tools and solid carbide tools. Data on available sizes, prices, recommended applications, feeds and speeds and grinding instructions are given.

For more details circle NED-4558 on enclosed inquiry slip

Brass Plumbing Fixtures

Central Brass Mfg. Co.—36-page illustrated catalog 50 is descriptive of complete line of brass faucets, fixtures, valves and replacement parts. Indexed to facilitate reference, booklet illustrates each part, lists specifications and indicates uses.

For more details circle NED-4559 on enclosed inquiry slip

Electric Water Coolers

Cordley & Hayes—Selection of proper type of electric water cooler for normal and abnormal atmospheric conditions and proper size for given requirement is facilitated by catalog folder form 20. It also gives details of three bottle and nine pressure types of electric water coolers.

For more details circle NED-4560 on enclosed inquiry slip

Research Microscopes

Bausch & Lomb Optical Co.—20-page catalog D-1010 and attached price list is guide to series E research microscopes with Balcoted optical elements having anti-reflection flare-reducing treatment to render images without glossy haze.

For more details circle NED-4561 on enclosed inquiry slip

Hydraulic Press

Denison Engineering Co.—16-page illustrated bulletin 120-A is descriptive of HydrOILic Multipress with wide variety of controls and operating components for press operations calling for controlled pressures of 35 tons or less. Accessories, adaptations and typical parts produced are shown.

For more details circle NED-4562 on enclosed inquiry slip

Atomic Research Instruments

Tracerlab Inc.—90-page illustrated catalog B contains descriptive material on instruments, Geiger Mueller tubes, tagged organic and inorganic chemicals and industrial beta ray thickness gages. Laboratory instruments include three types of scalers, automatic sample changing system, survey and rate meters and preamplifiers.

For more details circle NED-4563 on enclosed inquiry slip

FLUX-Stik

MAKES SOLDERING --FASTER --CHEAPER --CLEANER

Soldering Flux IN STICK FORM

Avoid ACID BURNS

- No surface cleaning necessary. Ideal on brass, copper, galvanized surfaces, etc.
- Non-running, non-acid, non-staining—controls fluxing.
- Eliminates acids, messy bottles of liquid, cans of paste, brushes and sticks.
- Handy as a pencil! Will not melt or run in heat!

Write for Free Sample and Literature

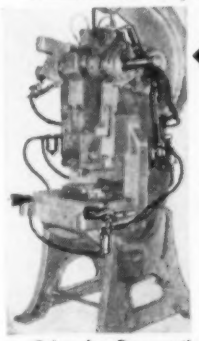
MFD. BY *Lake Chemical Company*
3065 W. CARROLL AVE. CHICAGO 12, ILL.

For more details circle NED-4564 on enclosed inquiry slip

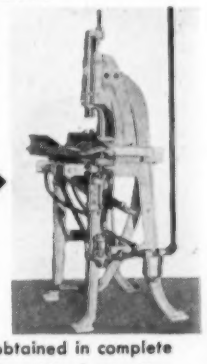
PROTECT Hands, END Fatigue with Schrader *IMPROVED* Press Controls

Why worry along with hazardous, makeshift protective devices for your presses, shears, and other machines? Why risk injuries? Why waste the productive strength of your workers in pushing foot pedals all day long?

Switch over to Schrader Hand-operated Pneumatic Press Controls and watch your production go up and your accidents go down. Complete sets of Schrader Controls are available and they are surprisingly inexpensive.



Schrader Pneumatic Press Control keeps hands out of danger. Can't be operated with one hand. Easily and quickly installed.



Hand-operated Pneumatic Control developed especially for foot presses. Eliminates fatigue, delivers uniform pressure each stroke, reduces spoilage. A complete, easily-installed set.

Schrader Pneumatic Controls may also be obtained in complete sets for foot operation, or for combined hand-and-foot operation.

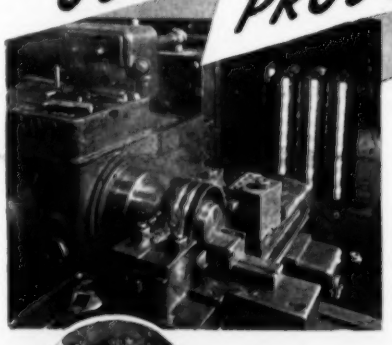
Write for more information and literature about Schrader Press Controls. For information about hundreds of other Schrader Air Control Products . . . Air Ejection Sets, Air Cylinders, Valves, etc., ask for 72-Page Catalog.

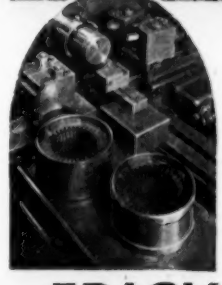
Schrader PRODUCTS CONTROL THE AIR

A. SCHRADER'S SON
478 Vanderbilt Ave., Brooklyn 17, N. Y.
Division of Scovill Manufacturing Company, Incorporated

For more details circle NED-4565 on enclosed inquiry slip

BIG MOTOR MANUFACTURER JUMPS PRODUCTION using ERICKSON *Precision Expanding Mandrel*





Using special Erickson face plate mandrel, drawbar type, with locators and positive drive pins, manufacturer turns outside diameter of motor stators and straddle faces; jumps production to 200 pieces per hour; preserves concentricity within very narrow tolerances. You'll probably be amazed at the almost countless applications to which Erickson Precision Expanding Mandrels can be adapted. Uniform vise-like grip throughout expansion range of 1/32", guaranteed accuracy of .0005".

Ask for Catalog "A-2" or Erickson Engineer

ERICKSON TOOLS
Division of Erickson Steel Co.
2305-A Hamilton Ave., Cleveland 14, Ohio

For more details circle NED-4566 on enclosed inquiry slip

FAST FINISH BAKING

Refinished Relay Covers and other Control Parts Formerly Air Dried in 8 Hours—Now a Better Wrinkle Finish is Baked in ONE Hour with the

Despatch R-S FINISH BAKING OVEN

● Minneapolis-Honeywell Regulator Co. uses the above Despatch R S Oven for refinishing of controls sent in for repair. The black wrinkle enamel on the relay cover shown is baked to an extremely hard, durable finish in 1 hour at 300° F. saving 7 hours of former air drying time! Other parts are baked ½ hour at 350° F. This fast baking of finishes speeds up the entire repair program, improves service to customers.

Despatch R S Ovens are well insulated, very economical, 100% controlled for uniform heat up to 500° F., with temperature variation seldom more than 3° ± F. Built in a range of sizes for a great variety of applications. Tell us your needs—

Write for Bulletin on R S Ovens.

DESPATCH OVEN CO. Established in 1902

Manufacturers of ovens for: Paint Finishing, Dehydrating, Curing, All Industrial and Laboratory Applications

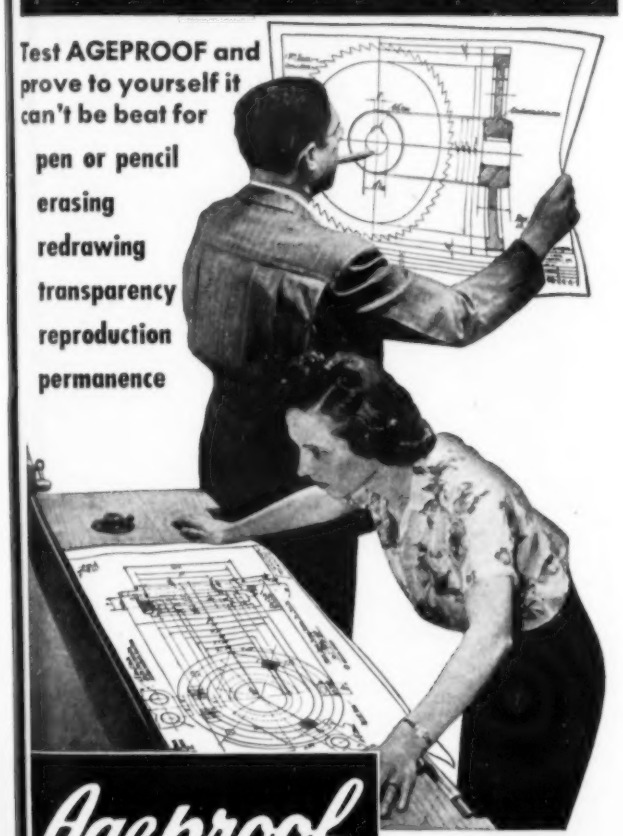
325 DESPATCH BLDG., MINNEAPOLIS 14, MINNESOTA

▲ For more details circle NED-4567 on enclosed inquiry slip ▲

BETTER DRAWING PRINTING

Test AGEPROOF and prove to yourself it can't be beat for

pen or pencil
erasing
redrawing
transparency
reproduction
permanence



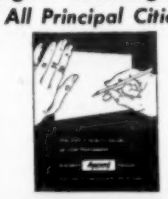
Ageproof VELLUM

Tracings on AGEPROOF VELLUM will never turn yellow, become brittle, or lose their super-transparency, because AGEPROOF VELLUM contains no wax, no oil, no grease to deteriorate. AGEPROOF VELLUM is fully plasticized, with the plasticizing agent permeating every fibre. That's why you can repeatedly erase on AGEPROOF VELLUM without troublesome ghosts in prints, and redraw without feathered lines if you are using ink. AGEPROOF is available in three different weights in either frost-white or eye-easing blue tint.

EUGENE DIETZGEN CO. • Chicago • New York • San Francisco New Orleans • Los Angeles • Pittsburgh • Washington Philadelphia • Milwaukee. *Dealers in All Principal Cities.*

FREE SAMPLES

Test AGEPROOF VELLUM! Draw on it with pen and pencil, erase, redraw, make test prints. Write on your company letterhead for samples, sent free.



DIETZGEN

DRAFTING, SURVEYING & PRINT-MAKING MATERIALS, INSTRUMENTS & EQUIPMENT

▲ For more details circle NED-4568 on enclosed inquiry slip ▲

New Literature—Continued

Air & Hydraulic Equipment

Hannifin Corp.—Salient features of company's new products exhibit at 1950 Tool Engineers Industrial Exposition are contained in 12-page illustrated pocket-sized bulletin. Variety of industrial air and hydraulic equipment is covered.

▲ For more details circle NED-4569 on enclosed inquiry slip ▲

Magnetic Tape Recorders

Amplifier Corp. of America—12-page folder is entitled "99 Questions Most Often Asked about Magnetape Twin-Trax Recorders." General theory, tape handling mechanism, mechanism performance data, operating facilities, standard and special applications, recommended accessories and sales information are among subjects discussed.

▲ For more details circle NED-4570 on enclosed inquiry slip ▲

Electronics

"Electronics—Principles and Applications" by Ralph R. Wright is 387-page text on basic electronics for non-electrical engineering students and physics majors. Topics covered include basic electronic circuits, alternating and direct current circuits and basic applications of electron tubes. Book is priced at $5.50. Published by Ronald Press Co., 15 E. 26th St., New York 10, N. Y.

▲ For more details circle NED-4571 on enclosed inquiry slip ▲

Industrial Tape

Polyken Industrial Tape—Dozens of Polyken tapes, their specifications and uses are listed in 10-page illustrated pocket catalog "Tape Is a Tool." Sample strips are reproduced with magnified sections which show construction details.

▲ For more details circle NED-4572 on enclosed inquiry slip ▲

Selector Switch

Arrow-Hart & Hegeman Electric Co.—8-page illustrated engineering data folder and target sheet aid electrical engineers in application of Push-Pull-Selector switch. Explained in detail is manner in which this device provides single master control that will serve from 8 to 16 operations. Target sheet is designed to aid in plotting electrical control requirements.

▲ For more details circle NED-4573 on enclosed inquiry slip ▲

Industrial Chemicals

Tennessee Eastman Corp.—42-page illustrated catalog "1950 Eastman Industrial Chemicals" offers concise description of industrial chemicals line. Listed are aliphatic acids and anhydrides, alcohols, aldehydes, plasticizers and solvents, aromatic amines, phenols, cellulose products, inorganic chemicals and others.

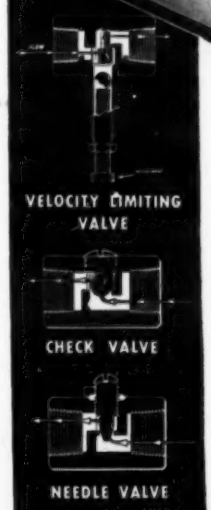
▲ For more details circle NED-4574 on enclosed inquiry slip ▲

Glass Pipe & Fittings

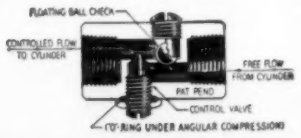
Fischer & Porter Co.—Glass pipe and fittings in ¼ through ¾-in. sizes are illustrated and described in 4-page catalog No. 94 which also includes information on recently developed metal-to-glass and glass-to-glass pipe coupling available in ¼ through 1-in. sizes. Precision-bore glass specialties including round, square and capillary tubing for use in high-accuracy barometers and manometers are described in 6-page illustrated catalog No. 95.

▲ For more details circle NED-4575 on enclosed inquiry slip ▲

FLOW CONTROL VALVE for Cylinder Speed ADJUSTMENTS over a WIDE RANGE IN AIR OR HYDRAULIC USE



The Pneu-Trol Flow Control Valve combines an efficient Stainless Steel FLOATING BALL CHECK which opens and closes at the slightest change in flow direction, with a Vernier Type VARIABLE NEEDLE ORIFICE adjustment in a compact control which has widened air and hydraulic cylinder application by providing precise control of cylinder action. Modifications of the Pneu-Trol Valve are available as Plain Check, check with Fixed Orifice (orifice drilled by customer in the Standard Check Valve), Needle Valve and Velocity Limiting Check, as illustrated at left. All Pneu-Trol Valves are made from bar stock in brass (up to 1000 psi) or steel (5000 psi) or other body metals to your specifications. All internal parts are Stainless. All valves available in 5 sizes—⅛", ¼", ⅜", ½" and ¾". Attractive prices—immediate delivery. Write for illustrated circular and price list.



WRITE ...

Pneu-Trol Devices, Inc.
3122 N. California Ave. Chicago 18, Ill.

▲ For more details circle NED-4576 on enclosed inquiry slip ▲

FLEXIBLE Stock-Keeping with PENCO Adjustable STEEL SHELVING

Penco Founded 1869 by L. Lewis Sagendorph

200 SIZES—in 4 Styles!

Arrange or re-arrange your storerooms at will with Penco standard *adjustable* steel shelving. Can be dismantled, erected, added to or moved at any time using simple tools. Keep pace with changing inventories or work flow. Write for catalog and *low* prices on Penco heavy duty shelving—*today.*

PENN METAL CORPORATION OF PENNA.
A Complete Line of Steel Lockers, Shelving and Cabinets
82 OREGON AVE. PHILADELPHIA 48, PA.

▲ For more details circle NED-4577 on enclosed inquiry slip ▲

How would you tool up—*to machine 59 different parts in short runs?*

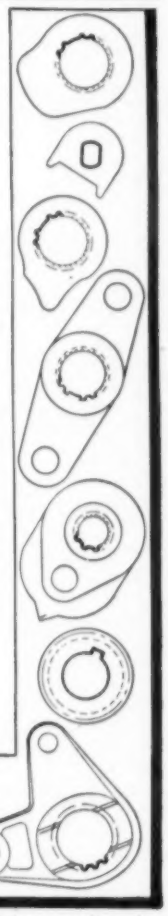
Warner & Swasey Company—on parts for its textile machines—did it very simply. The tooling consists essentially of

ONE Colonial Pull-down broaching machine, plus

THREE base fixtures, plus fixture adapters . . .

. . . all designed and built by Colonial Broach Company, Detroit. Net result:

High precision, fast metal removal, reasonable tooling cost, low change-over cost. For the complete story, ask for Broaching News, Vol. XI, No. 2.



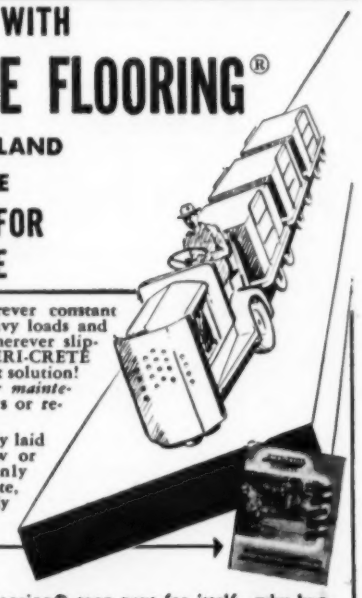
PIONEERS OF H.S.S. BROACHING
COLONIAL BROACH CO. DETROIT 13

▲ For more details circle NED-4578 on enclosed inquiry slip ▲

NO MAINTENANCE WITH EMERI-CRETE FLOORING®

MADE WITH CORTLAND EMERY AGGREGATE

DIAMOND-HARD FOR HEAVY-DUTY USE



For bruising traffic, wherever constant trucking or moving of heavy loads and equipment is necessary, wherever slipping is a hazard . . . EMERI-CRETE FLOORING® is the perfect solution! *Practically eliminates floor maintenance!* Ideal for new floors or resurfacing old floors.

EMERI-CRETE® is easily laid by your maintenance crew or local contractor using only Cortland Emery Aggregate, cement and water. Virtually indestructible.

Get FREE PROOF-POSITIVE Folder No. 601 Today.

Learn how Emeri-Crete Flooring® soon pays for itself—why hundreds of leading plants in every industry are enjoying years of maintenance-free service—*how you can make your own test of Emeri-Crete Flooring®!* Contains complete story, lists users, types of industries and many installations.

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WALTER MAGUIRE COMPANY, Inc., Dept. ND-6
60 East 42nd Street, New York 17, N. Y.
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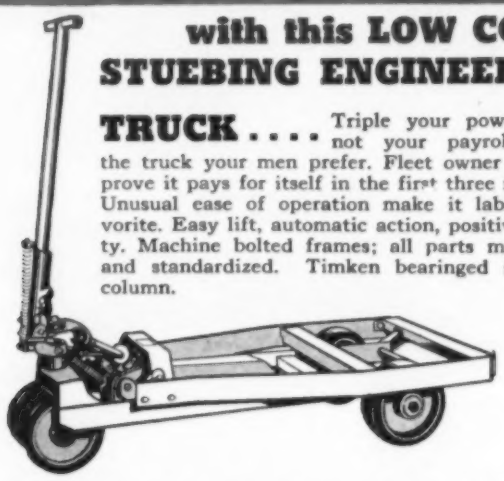
Company_____
Address_____
City_____ Zone____ State____

7743

▲ For more details circle NED-4579 on enclosed inquiry slip ▲

triple your "men-power"



with this LOW COST STUEBING ENGINEERED TRUCK . . . . Triple your power—but not your payroll—with the truck your men prefer. Fleet owner studies prove it pays for itself in the first three months. Unusual ease of operation make it labor's favorite. Easy lift, automatic action, positive safety. Machine bolted frames; all parts machined and standardized. Timken bearinged steering column.

For full details on the Red Arrow (single-stroke) or the Hydromatic (multi-stroke) send for Bulletin "G".

LIFT TRUCKS, INC.
Walter Stuebing, President
2425 Spring Grove Ave. Cincinnati 14, Ohio

For more details circle NED-4580 on enclosed inquiry slip

NEW PRINCO

DENSITROL* LIQUID DENSITY INSTRUMENT APPLIES LABORATORY ACCURACY TO PRODUCTION

NOW a fully dependable liquid density instrument is available designed for rugged production work, yet accurate to laboratory standards. Unaffected by ordinary plant conditions, the DENSITROL* provides continuous indicating, recording and/or controlling of process liquid densities.

Overall density limits of the DENSITROL are from 0.6 to 3.5 d. with spans of 0.10 to 0.005 d. full scale or equivalent. It is available with manual or fully automatic compensation for temperatures up to 200° C. Models are furnished for pressures up to 150 p.s.i.

The DENSITROL is supplied in materials suitable for handling any liquids.

Write for full information today.

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INDICATING
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CONTROLLING

PRECISION THERMOMETER & INSTRUMENT COMPANY
PRINCO
"PRECISION INSTRUMENTS FOR INDUSTRY"
1400 Brandywine Street, Philadelphia 30, Pa.
In Canada: PEACOCK BROTHERS Limited

For more details circle NED-4581 on enclosed inquiry slip

SYNTRON

"Vibra-Flow"

VIBRATORY FEEDERS

Will Handle—
—most all types of bulk materials—from light, fine powders to heavy, coarse lumps—hot or cold—dry or damp.

At—
—variably controlled rates from pounds to hundreds of tons per hour—from 110, 220 or 440 volt, 50 or 60 cycle.

To—
—crushers, grinders, driers, packaging machines, belt conveyors, etc.

An illustrated folder is available, or—if you'll send us the details of your problem—description of material to be fed, maximum feed per hour, desired length of trough, etc.—our Engineering Department will be glad to submit their recommendations.

SYNTRON CO.
405 Lexington, Homer City, Pa.

For more details circle NED-4582 on enclosed inquiry slip

New Literature—Continued

Triplex Pump

Aldrich Pump Co.—Full information on new 5-in. stroke triplex direct flow pump is presented in 6-page illustrated data sheet No. 64. With 3½-in. plunger diameter, pump will displace 225 gpm or 7700 barrels per day; and with smallest 1¾-in. diameter plunger, it will displace 56.3 gpm or 1930 barrels per day at 360 rpm against 2700 psi. (*This item appeared in Apr. '50 NED with a typographical error.*)

For more details circle NED-4583 on enclosed inquiry slip

Steam Plant Equipment

Yarnall-Waring Co.—12-page illustrated bulletin G-1307 deals with blow-off valves, water columns and gages, liquid level indicators and recorders, expansion joints, steam traps, strainers and spray nozzles for steam plant use.

For more details circle NED-4584 on enclosed inquiry slip

Reinforced Hub Grinding Wheel

Norton Co.—6-page illustrated folder "First It Cuts . . . Then It Smooths" deals with reinforced hub wheel which is suitable for both rough and finish grinding. It is comprised of sharp durable Alundum abrasive molded with special resinoid bond and reinforced with layers of strong fabric.

For more details circle NED-4585 on enclosed inquiry slip

Mills, Burrs & Countersinks

Severance Tool Industries Inc.—32-page illustrated catalog No. 18 presents descriptions, specifications and prices of line of high speed, cast alloy, cemented carbide and ground-from-the-solid tools. These include mills, deburring cutters, tubing cutters, countersinks, reamers and miscellaneous types.

For more details circle NED-4586 on enclosed inquiry slip

Herringbone Gear Reducers

De Laval Steam Turbine Co.—Line of heavy-duty herringbone gear reducers for capacities up to 1000 hp is described in 28-page illustrated bulletin H-HS. Included are complete descriptions of single, double and triple reduction units, horsepower rating tables for standard and semihigh-speed units, overhung load rating tables, dimensions and weights.

For more details circle NED-4587 on enclosed inquiry slip

Fire Protection Equipment

Rockwood Sprinkler Co.—12-page illustrated booklet 15T explains 15 types of protection for extinguishing and controlling fires in ordinary combustibles and flammable liquids. Both permanently-piped fire fighting equipment and portable fire fighting tools are covered.

For more details circle NED-4588 on enclosed inquiry slip

Fly Ash Collector

Buell Engineering Co.—Type LR fly ash collector for efficient fly ash prevention on small boiler installations of limited draft is discussed in 8-page illustrated folder. Unit combines high efficiency with low draft loss so that it can be used in natural as well as forced draft installations.

For more details circle NED-4589 on enclosed inquiry slip

Self-Locking Fastenings

Nylok Corp.—Lock and clinch nuts employing tough resilient nylon plug as locking medium are discussed and listed in 4-page illustrated folder "Nylok." It provides positive locking and reusability; resists heat, cold, age, gasoline, oil and solvents; and permits assembly from either end.

For more details circle NED-4590 on enclosed inquiry slip

Micrometer Dial Gages & Indicators

B. C. Ames Co.—Illustrated catalog No. 58 and accompanying price list on micrometer dial gages and indicators are designed to aid those interested in measuring or quality control of products or processes. Instruments and dial faces available with each are shown full-size so that user can decide which will best suit his requirements.

For more details circle NED-4591 on enclosed inquiry slip

Fractional Horsepower Motors

General Electric Co.—Features and advantages of typewriter, adding machine and series motors for calculators and portable accounting machines are explained in 8-page illustrated bulletin GEA-5420. For problems not covered by standard business machine motors, publication outlines design, development, engineering and manufacturing facilities that are available.

For more details circle NED-4592 on enclosed inquiry slip

Mechanical & Hydraulic Jacks

Templeton, Kenly & Co.—Complete specifications and application information on 123 models of ratchet lowering, hydraulic and screw type jacks are presented in 32-page illustrated catalog No. 50. Jacks are grouped by type so that those of interest to industrial plants, constructors, railroads, oil fields, mines, utilities and other specific industries can be located quickly.

For more details circle NED-4593 on enclosed inquiry slip

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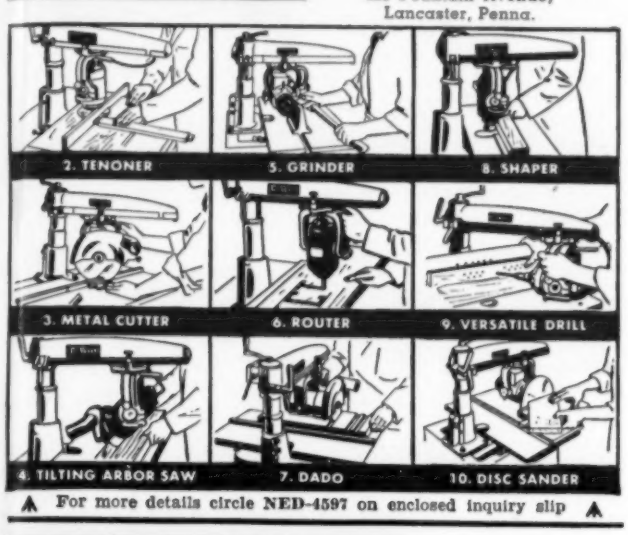

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For more details circle NED-4599 on enclosed inquiry slip

New Literature—Continued

Screw & Washer Assemblies

Eaton Mfg. Co., Reliance Div.—40-page illustrated engineering folder S 49 contains information on Springtites and Sems screw or bolt and washer assemblies designed to reduce labor and speed up production. Dimensions of units with round, fillister, pan, truss, hex and flat heads are presented.

For more details circle NED-4600 on enclosed inquiry slip

Aircraft Products

Air Associates Inc.—28-page illustrated brochure entitled "This Is Air Associates" covers personnel of organization and facilities for manufacture of wide variety of electronic, hydraulic, pneumatic, electrical and mechanical aircraft equipment. Numerous photographs depict production in process.

For more details circle NED-4601 on enclosed inquiry slip

Bag Flattener

Flexoveyor Mfg. Co.—Operation of bag flattening machine is depicted in 4-page bulletin No. 300. It eliminates air from bag and evenly distributes contents so that bag can be piled easily and will occupy minimum floor space. It handles approximately 1500 bags per hour.

For more details circle NED-4602 on enclosed inquiry slip

Continuous Mixer

Yoder Co.—No. 601 continuous mixer incorporating constant volume densifier is subject of 6-page illustrated folder. Densifier eliminates need for constant weight feeders, weight batching and moisture determinations. It automatically reduces aggregates to constant volume regardless of moisture contents.

For more details circle NED-4603 on enclosed inquiry slip

Automatic Metering System

Hetherington & Berner Inc.—Fluidometer automatic metering system designed especially for batching of light or heavy liquids is subject of 8-page illustrated bulletin FL-49. System is adaptable to practically every liquid measuring problem and is equally accurate on liquids of high and low viscosity.

For more details circle NED-4604 on enclosed inquiry slip

Springs & Formed Wires

Colorado Fuel & Iron Corp., Wickwire Spencer Steel Div.—28-page illustrated manual entitled "Springs & Formed Wires" describes and shows compression, extension, torsion and flat wire springs and formed wires made for variety of special purposes. Helical spring design tables; spring formulas; and discussion of heat treatment, dimension variations and fatigue failure are included.

For more details circle NED-4605 on enclosed inquiry slip

Anticorrosion Coatings

Minnesota Mining & Mfg. Co.—Sample chips of 28 different anticorrosion coatings for metal are included in folder entitled "Coro-Gard Brand Protective Coatings." Included among top coats are both flat and glossy finishes in variety of colors, antifouling finish for metal below water, and four antiskid coats that incorporate nonsparking aggregate.

For more details circle NED-4606 on enclosed inquiry slip

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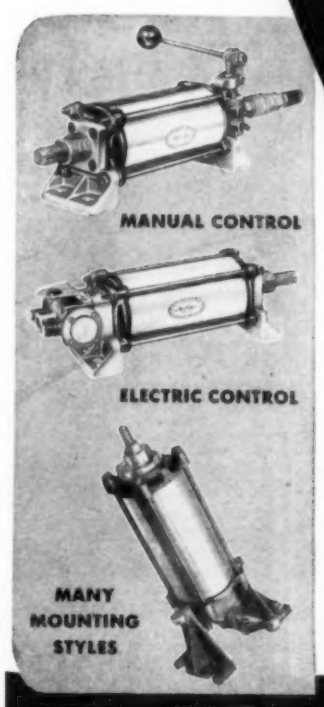

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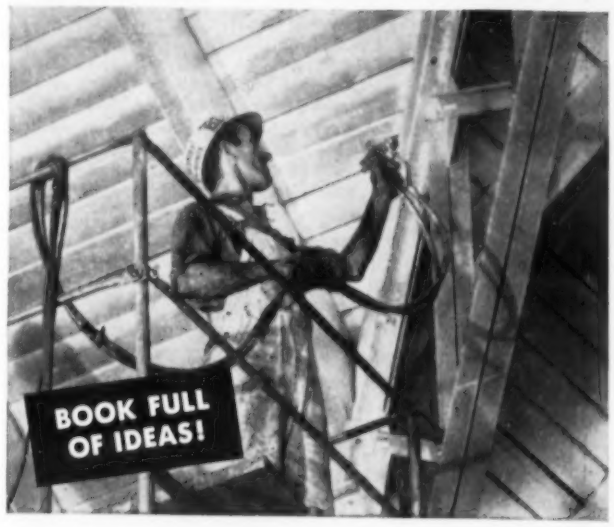

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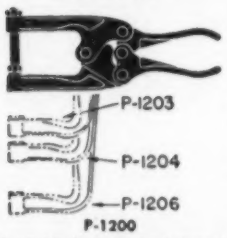

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NEW EQUIPMENT DIGEST

NBP CCA

EQUIPMENT MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

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Available from PEERLESS PUMP DIVISION
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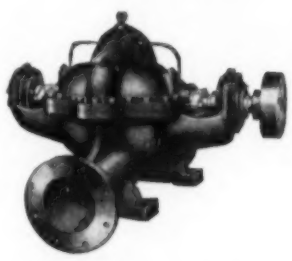

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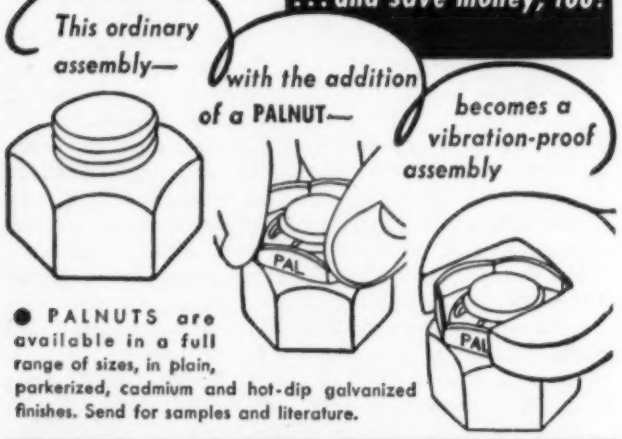

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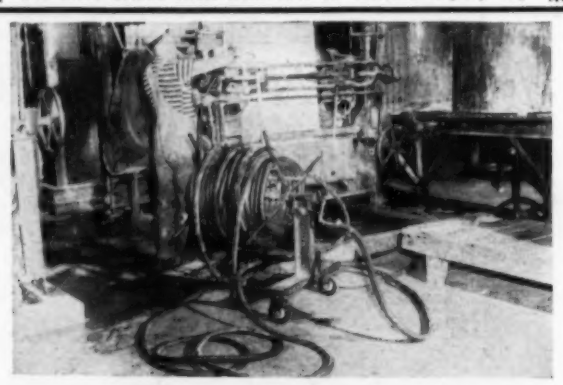

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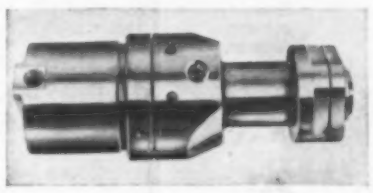

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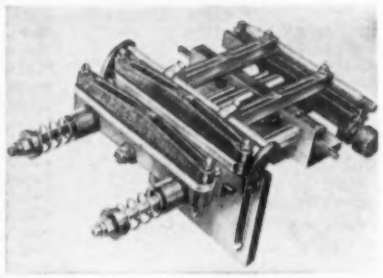

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available with nosed-over section

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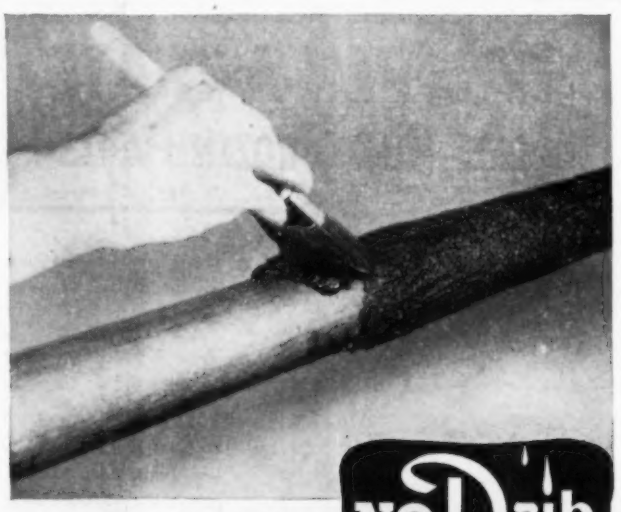
▲ For more details circle NED-4622 on enclosed inquiry slip ▲



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(Div. of Black & Decker Mfg. Co.)

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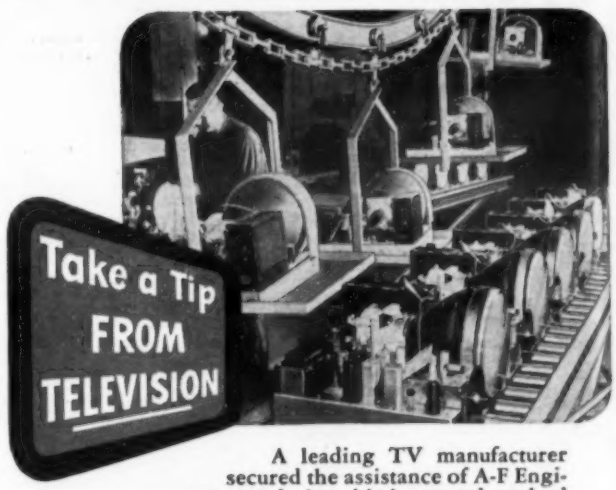

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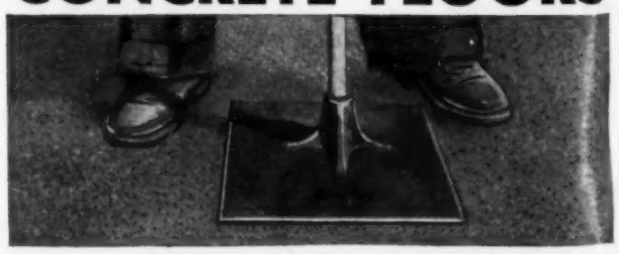

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